THE

SOUTHERN PLANTER,

A MONTHLY PERIODICAL,

DEVOTED TO

AGRICULTURE, HORTICULTURE AND THE HOUSEHOLD ARTS.

VOLUME XI.

RICHARD B. GOOCH, EDITOR.

RICHMOND:

PRINTED AND PUBLISHED BY P. D. BERNARD, SOUTH TWELFTH STREET.

1851.

THE SOUTHERN PLANTER,

Devoted to Agriculture, Horticulture, and the Household Arts.

Agriculture is the nursing mother of the Arts.—*Xenophon.*

Tillage and Pasturage are the two breasts of the State.—*Sully.*

VOL. XI. RICHMOND, JANUARY, 1851. No. 1.

R. B. GOOCH, EDITOR. P. D. BERNARD, PROPRIETOR.

UNION OF THE AGRICULTURAL INTEREST.

Upon a question like that which now agitates the confederacy of the States—we mean the virtual interference with the domestic institutions of the South—we should not deem ourselves as departing from our position of political neutrality, if we were to speak out; because when our firesides are invaded, no one, with the heart of a man, has a right to know a political partisan. When the rights of slaveholders are attacked, the deepest, deadliest of all the stealthy blows that could fall, must reach the farmers amongst us. And if we saw such blows coming, we should be recreant to duty did we not make known the fact. But we trust that better times are coming.

Various movements, preventive in their nature, have been made with a view to the great object of *self-protection at home.* We had purposed giving publication to some of them, but they so crowd upon us that such a course would be impracticable. In January, 1850, we published an article on the subject of "Immigration to Virginia," from an able pen. It recommended the lands of Virginia and suggested that we might have increased prosperity by procuring immigration hither from the North. The replies to that communication were so numerous and the remonstrances so earnest, that we were compelled to close the door of discussion or be instrumental in keeping up an exciting controversy. The feeling then existing amongst our people has since been increased almost tenfold. A discussion here would have no limit.

Our object now is to recommend *union among farmers*—union for the advancement of their mutual interests—union for protection. In making this suggestion, we cannot do better than by quoting from a letter of John Taylor, of Caroline, the illustrious Arator, dated Jan. 22d, 1821, and addressed to the delegation of the United Agricultural Societies of Virginia. After recommending union and concert between Agricultural Societies, he says:

"Such a union and concert seem to me to bear no analogy to leagues or combinations suggested by fraud. On the contrary, it is conformable to the principle which caused men to unite in civil societies for the defence of life, liberty and property against violence and imposition—and strictly analogous to the confederation of the United States. This was not entered into for the purpose of invading the rights of other nations—but to prevent other nations from invading our own. * * * There is even a distinction between the union of the States and a union of agriculturists in favor of the latter. The union of the States is able to invade the rights of other nations; but the union of agriculturists cannot permanently invade the just rights of other interests. It cannot fleece them, because as the agricultural interest embraces, and must forever embrace, a vast majority of the people, the spoil to be acquired from a very inferior minority would be inconsiderable and its division impracticable. As the chief consumer of imported articles, and the ultimate employer of merchants, manufacturers and sailors, it cannot injure either of these classes without inflicting a wound upon itself which could only be healed by removing the injury.

"The agricultural interest is, therefore, in this country, a patriot from necessity and an umpire of the public good of superior integrity to any other interest."

RENEW YOUR ORCHARDS.

As the season for spring planting of fruit trees approaches, we are reminded of the well stocked nursery of our friend and neighbor, Joseph Sinton, Esq. Whoever is in want of fruit trees cannot go amiss and will not come away disappointed should they call upon him. The nursery kept up by him for thirty years at the same place is as well appointed as ever. The cars pass through the farm, and last sum-

mer we knew of an instance where Mr. Sinton sent by them a lot of cuttings ninety-five miles. They arrived in time to be grafted the same day they were cut.

It is notoriously a fact that the orchards of Eastern Virginia have deteriorated during many years past. Some novel varieties of fruit have been introduced, but the old trees have wofully decayed. On many farms, and in situations well adapted to fruit, they are only left to tell where comfortable habitations once were. Virginia annually buys thousands' worth of the products of orchards in other States, when she ought, in truth, to be selling. Besides, summer fruits, especially peaches, she takes from the North, for consumption in her towns, preserves, jellies, pickles and other condiments, and a large amount of cider, under the name of *champagne*.

The only sure means of keeping up our orchards is to attend to them and renew them from time to time, supplying the places of old trees with young ones. No farm should be without good, wholesome fruit. In many countries, particularly on the continent of Europe, it is one of the necessaries of life, and performs an important part in the dietetic regimen of the population.

FENCES—FENCES.

At this season of the year every prudent farmer will begin to look after and provide for the fences which are to secure the coming crop. Fence well, if fence you must. It saves time and trouble, in the end. That man who can use his laps and indifferent trees for firewood, reserving the more valuable timber for strong and enduring fences may be congratulated upon his comfortable circumstances.—How shall we speak of the tenant farmer, especially if he have just moved to a new home, with every thing to put in order (or *out* of order, as some tenants act,) around him. The winter must needs be nearly over and seeding time at hand before he can get "fixed" in such a way as to "go about" his fencing. The trees are then just coming into that condition—the sap rising—when they ought not to be felled; and thus the proprietor shares the evil with his tenant and is destined to encounter still further injury from his next tenant, inasmuch as the material for such fences, cut at such a time will not last. The State of Virginia has suffered from the absenteeism of proprietor as well as "Ould Ireland," and in nothing, on the farms, so much as in the waste of timber by overseers and agents, not to mention lawless depredators. An officer on the quarter-deck of a battle-ship (which it required a small forest to build) as she floated in the Caribbean sea and saw the Caribs cutting down the cabbage tree for the sake of the fruit, exclaimed against the barbarity of the people. Are not some of us, *mutatis mutandis*, equally *barbarous?*

For the Southern Planter.

EXPERIMENTS WITH GUANO, &c.

Mr. Editor,—A disinclination to appear in public print has heretofore prevented me from giving an account of the various experiments I made during the past season with guano, Chappel's fertilizer and Kettlewell & Davidson's tobacco regenerator. A request from your correspondent and my friend, Mr. Booth, in your November number, as well as private inquiries relative to these experiments, induces me to give, in your journal, a brief detail of them.

In the fall of 1849 I was induced to try guano on wheat. I selected one acre of worn-out land, as poor as any on my farm, in order to test its value. As early in the season as practicable I ploughed in three hundred pounds of Peruvian guano. The ground being very hard and dry, this was done very imperfectly. The wheat was then sown and the land harrowed as usual. In a few days afterwards, two of the hardest rains ever known in this country fell, and washed it very badly. Though the season was unfavorable I got fourteen bushels of good wheat. I also used upwards of a ton on good land, with evident benefit, but the effect was not as favorable as on the poor and worn-out parts of the field. This has been the experience of all who tried guano so far as I have heard. It will pay better on poor land, than on rich, and is valuable for equalizing fields.

During the same season I made as fair an experiment with Chappel's fertilizer as I could institute. In the middle of my wheat-field there was a gall of about an acre. On one-half of this I applied a barrel of the fertilizer, which cost on the ground three dollars and ninety cents. On the other, one hundred and fifty pounds of guano, at a cost of three dollars and seventy-nine cents. The half acre to which the fertilizer was applied did not produce the seed sown; the clover was very scat-

tering, and the benefit to the land not as yet perceptible. The guanoed portion produced about nine bushels of good wheat; about as much clover, and the land now looks better than the other. I also tried the fertilizer on land of medium quality with no visible benefit. This manure certainly does not suit our soil, and I would not haul it from Petersburg for it.

Last spring I applied on an acre of my tobacco lot, which was in pretty good heart, two barrels of Kettlewell & Davidson's regenerator or tobacco manure, costing, on the field, nine dollars and eighty cents. On the rest of the lot I used farm-pen manure, as usual.—The hills were made up in good time and planted about the first of June. The tobacco on this acre was very fine, equally as good as any part of the lot and much better than some. On another acre, in a different lot, I used the same quantity of the regenerator by the side of land manured with stable manure. The tobacco was planted here so late that it had no fair chance, and made very little. From these experiments I am induced to believe that the regenerator is not a *humbug*, and should, from its constituent parts, be very valuable, but its cost is too great to justify its use, to any extent, with us. I have yet, however, to see whether its application for tobacco will benefit the wheat which is to follow on the same land.

I also used guano on tobacco and saw a good deal used in my neighborhood. I applied it broadcast and in the hill. Its beneficial effects were very visible, especially where it was used broadcast, and from all I have seen and know, it should never be used in the hill. The method for applying it, I believe, is to sow it broadcast, and plough it in as short a time previous to hilling the land as possible. When used in the hill, though placed six inches below the plant, unless the season be remarkably moist, it will kill the plant; but when used in the other mode, it pushes forward the plant very rapidly, giving it a healthy and vigorous start.

Hoping this plain statement of facts relative to *bought* manures, now so popular, may benefit some of your readers,

I am yours, respectfully,

RICHARD IREY.

Nottoway, Dec. 6, 1850.

THE GUANO INSPECTION, &c.

Just before putting the present number to press we are made acquainted with the contents of a memorial to the Legislature praying for a repeal of the inspection laws of Virginia, so far as they apply to guano, gypsum, fish and spirits. The chief article aimed at is guano. We regret that such a movement should have been made, because we feel convinced that the inspection now required has operated beneficially. We should rather be inclined to extend the scope of the inspection so as to embrace within the provisions of the law various other fertilizers, poudrette, chemical salts, &c. about which complaint has been made, and the charge of selling spurious articles preferred. We hear that about five hundred bags of Peruvian guano, offered for inspection in Richmond, have been rejected even during the short period the law has been in force. But of this subject, we may have more to say hereafter.

For the Southern Planter.

DOMESTIC HAPPINESS.

Mr. Editor,—I know of no subject of paramount interest, none so comprehensive and all-absorbing as the one heading this article, and yet I apprehend there is none so little understood, even by those who appreciate it most highly; that is, the *means* of *procuring*, and the *sources* of domestic happiness. One has told us "the proper study of mankind is man." Another, "know thyself." The philosophy of one had emboldened him to unite for life with a shrew, relying upon his own power to govern himself, whilst she raved, which enabled him, at the close of a "curtain lecture," when she furiously threw the contents of a certain vessel in his face, coolly and calmly to reply, "I thought there would be a shower after so much thunder." Another has said, "spare the rod and spoil the child." These and such kindred advices have bewildered thousands; yea, tens of thousands have "split upon the rock" of humoring a child and reasoning a woman. Just reverse this and all is easy—"*Reason a child and humor a woman.*"

CHARLOTTE.

December 20, 1850.

EGG-SUCKING DOGS.

A *prescription* for such, is said by high authority, to be three grains tartar emetic, a teaspoonful of Indian turnip grated; the two to be mixed with an egg; the shell then replaced as nearly as possible, and the whole administered. He will ever afterward shun an egg. Many a favorite animal has had to lose his life for want of this or some other teaching on the part of his master.

From the Pendleton Planter and Farmer.

RAISING PORK.

As many farmers have lost corn, some by freshets and some by drought, I beg leave to offer a few remarks on the subject of raising pork.

A few years since I had a small stock of hogs of the common breed of the country—a sow, and eight pigs just cleverly weaned. Sometime in November I put them on a stated allowance. For each hog there was taken from the crib daily, one pint of shelled corn, which was put in soak during the day and in the evening boiled. This was fed away the next day—one half in the morning the other in the evening. This plan was pursued till the next October, and on the day we were turning them into the pea-field, one of an average size was taken and weighed, and it was ascertained—corn being that year worth forty cents per bushel—that each hundred weight gross of my pork had cost me one dollar and seventy-five cents. I had fed away more than that money's value of corn on each hog—but then my hogs weighed much more than one hundred pounds.

Perhaps some farmer will exclaim—here is a great deal of trouble, and there is such a thing as "paying too dear for one's whistle." That the reader may judge of this for himself, I will state, as briefly as possible, my fixtures and method of feeding. A common iron pot, such as washer-women use at the branch, was set up on a few rocks, the interstices of which were filled with clay-mortar. Around this boiler was put up a small pen, one rail square, and the rails well notched down, to secure the fire from the wind. Four small posts with crotches set up, one in each corner of the pen, enabled us to place boards over-head, which made shelter quite sufficient for such a purpose. All this was done by common farm hands, and was the work of but a few hours.

Such were my fixtures, and now for my method of cooking and feeding. *It was made the business of* the man who took out the horse-feed in the morning, to take out at the same time the allowance for the hogs. The corn was emptied into the boiler with water enough to cover it completely, and there it remained in soak through the day. In the evening it was *made the business of a little boy* after driving up the cows, to make a fire under the pot, and he was required to remain until the water boiled and then he went away. The next morning the corn was taken from the boiler by hand—the acid slop being left—partly to save the carrying of water, and partly that the mess for the next day, might be soured as speedily as possible. If the hogs be fed in a trough or on the ground with corn in the ear, the more powerful animals make war on the weaker ones, the food is eaten hurriedly by all and is imperfectly masticated—much of it is bolted without being chewed at all; and the more hungry the animals, the more certainly will all of this take place. To avoid all this loss, the boiled corn was taken to the pasture near by, and was broadcasted on the surface of the grass—a method of feeding which placed each hog on an equality, and enabled each to get his fair share. Nor was this all—every grain had to be picked up separately—the mouth consequently, could not be gorged—and this way of feeding may be recommended as an infallible preventive for bolting. Indeed, by boiling and soaking, the corn becomes so tender and so distended, that it is scarcely possible for a single grain to escape the tooth of the feeder, and the farmer may be assured that every particle of nourishment in the food, has been transferred to his hog.

Here then, Messrs. Editors, was an actual experiment—something which has been done—something which every farmer may do—and having made a statement of my fixtures, my way of cooking and feeding, and the cost of pork per hundred, I leave it to you to say whether I have "paid too dear for my whistle."

And what think you, reader, is the gain in the weight and bulk of corn by this plan of soaking and boiling? Make the experiment for yourself, I beg you, and you will find that every bushel treated in this way, will gain about fifty pounds in weight, and what went into the boiler as one bushel will the next morning measure very nearly two and a half bushels. But to obtain this result, it is indispensable that there be a plenty of water both when soaking and when boiling.

It is required of a witness that he tell not only the truth but the whole truth, and acting on this principle, I proceed to say that my hogs were debarred advantages which they are in the habit of enjoying almost every where else. I have no interior fences on my farm separating the small grain from the corn, and consequently, not only my hogs, but every species of stock are totally excluded from my stubbles. Neither

did they have the benefit of the rich slops thrown out by the cook and washer—for the housewife protested that if they were admitted to the kitchen yard, *they would be the death of every chicken.* Nor did they have the use of the horse-lot and stables—the horse-boys declaring that if admitted there, *the fleas would be the death of them.* I weakly yielded to this popular clamor, and my hogs were limited to a poor range and their slop corn.

There was another disadvantage which I disregarded at that time, but to which I attach great importance now. My hogs were without shelter, and lay in the woods, exposed to frost and rain. And here I shall be met at the threshhold by a phalanx of farmers, and shall hear that hogs will not "do well" if sheltered, and shall be told by way of proof, that whenever permitted to sleep under a house they become mangy, and diseased. Now, if it were an established fact, that the shelter is the cause of these ailments, there would be nothing more to be said—but that is precisely the point about which we may be well entitled to have our doubts. Is it not acknowledged by every farmer, that cows, sheep, horses, and mules are the better for being protected? and if so why not the hog? Like them hogs have hot blood, and in their anatomical structure and the processes of respiration and digestion, they are precisely similar. The analogy then is altogether in favor of their being sheltered. If we appeal to their instinct, the answer is exactly the same. When left to themselves they select with unerring sagacity, the warmest spot on the farm for a bed. Besides, only look at them if you please, when turning in for the night in a cold spell—why they are perfect *connoisseurs* in the art of *snugging up*, and laying aside all animosities, jarrings and violations of courtesy manifested at feeding time, they unite with one consent to make each other comfortable.

It is the habit of this animal when he finds good quarters, to return to them at night with the utmost punctuality; and it is also their practice to turn up the earth with their snout before going to rest. Now when all this goes on for months, and under a house too, a spot from which the rain has been excluded for years, the effect is, to reduce the soil about them to what apothecaries call an *impalpable powder*, which is set in motion not only by the slightest movement, but by the very breathing of the animals themselves. When once afloat, it insinuates itself into the pores of the hog's skin, and finds its way in large quantities into his lungs, and it may be confidently affirmed that it is not the shelter, but this levigated dust, which is the cause of all the diseases incident to these animals when occupying shelters with ground floors. If these views be correct, it is indispensable when making shelter for hogs to have it so floored with plank or poles as to exclude them entirely from the ground.

In providing a proper shelter for such valuable stock, the farmer will minister not only to the growth and comfort of the animal but to his own feelings of humanity and his own profit. In Liebig's work on animal chemistry the principle is laid down and illustrated that with man warm clothing is to a certain extent a compensation for food, and that what clothing is to the human species, good shelter is to the animal creation. I merely glance at this argument and do not feel competent to give an abstract, but content myself with referring to the book itself. But if the principles laid down by him on this point be correct, and we have not seen them controverted, the farmer may be assured of this—that as long as his hogs are exposed to the frosts, the sleets, the snows and the merciless rains of winter, all those portions of his feed, which if sheltered would *go to form fat*, are wholly expended in *forming heat* to enable the animal to resist the external cold. To this extent the food given is a total loss to the farmer, and if this be so, a good shelter would be equivalent to a saving of so many bushels of corn. In a country like this, therefore, where logs are plentiful and corn scarce, the farmer who neglects to provide protection for a stock that contributes so much to his daily comfort, is guilty of the most miserable economy imaginable. If on this point I have trespassed on the patience of the reader I crave his pardon; my sole apology is this, I have neither seen nor heard of any individual in these latitudes who has ever made a shelter *expressly* for his hogs. I hope there may be many such, but if so their example has not been contagious.

In conclusion, I recommend earnestly this plan for soaking and boiling corn for hogs. The saving is great, very great, and if the farmer will procure a thrifty breed of hogs, provide a proper shelter, give them access to his stables, pea-fields, stubbles and kitchen slops, and in addition one pint of corn per day, boiled, we are warranted in saying that they will never take a backset, but will grow and thrive uninterruptedly.

At the end of fifteen months they will be fit for bacon and thus the cost and risk of keeping them till two years old and over will be avoided. I am confident if our farmers were to combine a system of saving their manure with the plan of feeding above described, that Kentucky pork might be expelled from this portion of our land.

In my estimate I designedly said nothing about the cost of keeping the hog previous to weaning because I consider the manure that he furnishes is much more than an equivalent for that expense.

"THE OLD FARMER."

Pendleton, Oct. 20, 1850.

GOOD BUTTER IN WINTER.

We often hear the complaint that butter made in winter is poor. Ours was so for several seasons. It was very slow in coming, and frothy, white, sometimes bitter; while butter made from the same kind of milk in the warm seasons was good. I devised many plans for improvement, such as throwing in salt, warm milk, scalding cream, &c. but to no purpose. At length I scalded my milk when brought from the cow, afterwards setting it in either a cold or warm place, as was most convenient. I mean, I communicated sufficient heat to destroy the effect which frosty feed has in autumn, or dry feed in winter, upon it. Since which time we have made, with fifteen minutes' churning, purer, sweeter, and more yellow butter than we have ever made in summer—and sometimes from the frozen cream gradually warmed. And were it not that the increase of manufactures, the pursuit of fashion, and other causes combined, render helping hands in a dairy room now-a-days very scarce, I should be at the trouble of scalding my milk before setting it during the summer as well as in the winter; for surely butter in this way possesses a delicious richness and dryness which cannot be found in any other.—*Cultivator.*

From the Genesee Farmer.

DESTRUCTION OF INSECTS.

Mr. Editor:—One of the greatest misfortunes to which mankind are subject, is the aversion to study and observation—an unwillingness to abandon old notions, and to learn from the experience of others. We cleave to our prejudices, even when our judgment is convinced that we are wrong. It is true, a spirit of inquiry is awakened in some quarters, which augurs a better state of things; but it is equally true that the spirit of prejudice is dominant throughout the land, and is likely to continue, since those who most need light are least willing to receive it.

I have been led to these reflections from reading, in the Rural New Yorker, an article on the subject of "Birds, Insects, &c." and in the last number of the Farmer a few lines on the subject of "Destructive Insects." The *mole* I have always considered an inoffensive animal. I know he is sometimes accused of doing mischief, but I have no positive evidence of it, although I have been acquainted with him, more or less, even from my boyhood. My father never encouraged the killing of the little *black coats*, although they sometimes "ploughed his meadows;" for he observed that the meadows did not appear to be injured by the operation, but rather benefited.

I have read two short articles on the habits of the mole. The one was in an English publication, and is now mislaid. I will, however, give you the substance of it as I now recollect it. The writer remarks, that having a small piece of ground very much infested with moles, he was induced to investigate their habits. In the course of the investigation, while digging up the ground, he discovered their store-house. It consisted of a smooth cavity in the earth, filled mostly with *cut-worms*, which had been stunned, but not killed, by being slightly wounded in the back of the neck. Whether this was their winter's store, or a supply for their young family, I do not now recollect. I only remember the fact.

The other article is also from an English writer, and being rather longer tha I wish, I will abridge it, retaining the author's statements, and, as far as possible, his language:

"Some ten years ago," says the writer, "when I commenced cultivating the little land I now hold, it was full of wire-worms. My crops were greatly injured by them, and in some places entirely ruined. To remedy the evil, I encouraged *moles* and partridges on my land. Instead of killing the moles, I bought all I could, and turned them out in my fields, which were soon, one after another, full of mole-hills, to the great amusement of my neighbors. My fields became like a honey-comb, even among my standing and ripening crops. The worms in my grounds are now all destroyed, the moles having nothing to eat, are obliged to emigrate to other lands, and thus get bowstringed by savage men, whom they come to serve. The wire-worm is the

chief food of the mole. If you doubt it, open the stomach of one, and see. It is a vulgar error to suppose that they root upon young corn—they do not trouble it till the worm has first attacked it, and then are blamed for the crime of another. All summer, partridges live upon insects, wireworms, &c.; and consider how many millions a covey of them will destroy in a single summer."

VINEYARDS AND THE ART OF MAKING WINE.

A great many persons are experimenting at the present time, with vineyard culture, and there is a good deal of inquiry regarding the best mode of making wine. The following article, which we copy from the New Orleans Crescent, contains the simplest and best practical directions for wine making, that we have yet seen, and we say this after having examined the best foreign treatises on this subject, and experimented a little at various times with fermentation, &c. ourselves.

Our readers will remember that a vineyard for wine must be manured and cultivated on a different principle from one where large crops of market fruit are desired—as it is the vinous quality of the juice that is the all-important point in the former case. Large size and good flavor may be attained by high manuring with animal manure, while the latter would injure the quality of the fine wine—*Downing's Hort.*

In DeBow's Commercial Review for September last, I published a letter on the vine culture at the South, and since that time I have received weekly, and almost daily, inquiries for further information on culture and soil, and my method of making wine, from the Roanoke. As the soil of my vineyards is rather of a tenacious kind, and of course much injured by working in wet weather, I defer the last spring working until the buds begin to break or open (which happens here early in April with the Roanoke, but much sooner with the other kinds), for if the soil is worked too early a two-fold injury most invariably follow—first, it creates a stimulant to the plants and excites the circulation of the sap and pushes the buds too forward into life, thereby exposing them to the late spring frosts; and, in the second place, if worked early, the hard rains in March pack the earth very close, thereby greatly retarding the growth of the vines; whereas, if the work be left until after, the soil remains loose and friable, so that the air and light—so essential to the existence of vegetation—are admitted more readily to the roots, preventing that sluggish growth that otherwise must follow on renewing the soil. When the soil of the vineyard is found to be on the decline—which is easily discovered by the fruit degenerating in size and tenderness, and the growth of the wood being much shorter from joint to joint, and assuming an ash grey, instead of an olive brown color—where such signs make their appearance the vigneron may with safety apply some new soil, taking care, however, to apply it with caution; for the vine, in the vegetable kingdom, is far more intemperate than man in the animal, and it never fails to collect all the most gross and the very filthiest materials within its grasp to gorge itself with; and, when it so happens that such soil is placed within reach, a most prolific growth of wood and foliage follows, and sometime a good show of fruit; but before the latter matures it rots and falls off. Seeing then that the vine is so intemperate in its desires and that it really is susceptible to every change made in the soil, however trivial, much caution at all times should be used when renewing takes place. Rich manure should never be applied under any circumstances, no matter however poor the land may be. My plan is always to have by me a good supply of compost, of well pulverized and decomposed materials, and from one to two wheelbarrows full are scattered round each vine every year in the fall and well raked into the surface soil (my vines being twenty feet apart). This plan keeps up a uniformity in the quality of the soil, and is much better than to apply a large quantity at once every two or three years, which acts so suddenly on the vines; for, be it recollected, although the vine is one of the grossest feeders on the soil, yet it is absolutely the most abstemious when kept in proper bounds, thriving in land so poor that it would scarcely sustain life in other plants.

My compost is made in the following manner: every fall, after the field and garden crops are brought in, I have collected in a large heap, three feet high and six wide, all kinds of trash, such as cornstalks, potato vines, cabbage leaves and stumps, chips from the wood-yard, sweepings from the house and poultry yard, spent ashes, and rotten log; and, if not enough, fallen

leaves from the woods. When the pile is made up, it lies all the fall, winter, and spring. In the meanwhile, a cask is placed at some convenient distance near the house, which receives from day to day all the chamber lye, dish water, soapsuds, and meat bones. Once or twice a week this is carried and thrown over the compost heap. By the following spring the heap shrinks down to about a foot high. Then we throw on it a load of sand (the coarser the better) for every three or four loads in the heap; the pile is then turned over and mixed well together and left so until next fall, but not allowed to receive any more slops from the house—that being carried to a new heap. During the second year the compost heap is turned over once or twice at least, and in the fall it is fit for the vineyard, for renewing the soil as aforesaid. The aspect or situation of the vineyard I think somewhat important, and that of an eastern or as near as possible I prefer, as from it we receive the rays of the sun, so grateful to vegetation in its early dawn. A southern aspect, so much desired in colder climates, does not so well here, the heat of which is so intense from twelve till four, that the skin of the fruit is much hardened thereby, and the air vessels in the leaves are contracted, and their breathing functions are impaired for the time, and the leaves in consequence are made to sicken and to droop, until the decline of the sun's powers brings relief in the dew of night.

After having said so much and explained so little on the work of the vigneron, I will now proceed on the work of the vintner. *Wine making* I consider almost a mechanical art. To arrive at the arcana of which, however, it is necessary to pursue a regular method in the process, and by doing so any person of ordinary ability can acquire it. As my desire is only to inform novices in the art or young vintners who will be content with simple rudiments unconnected with technical terms, I shall set down my plan in the plainest possible manner; for it is a well known fact that thousands of writers of the present day undertake to enlighten the unimformed, and their manner in describing things is so hard to comprehend that no one less informed than themselves can understand one word of the subject on which they undertake to write. I speak from experience, as I have by me a number of works on the subject I am now writing of, and scarcely one of them I consider worth reading, and from the cause above stated. This fault arises, no doubt, from the fact that few practical men find time to write, while fewer still who write give themselves the trouble to practise what they write about; thus illustrating the motto that "an ounce of practice is better than a pound of theory." So much for the introduction, now for the practice.

The plan I am about to describe is on a small scale, but, if the vintage is large, the utensils can be altered to suit. The vintage being ripe, you should have already been provided with a few clean tubs. Fresh empty whisky barrels cut in two do very well. Your fruit being gathered, reject all rotten and under ripe; throw into one tub as much as will cover the bottom one inch deep; take a new maul (beech if possible, as this wood is an advantage to new wine), such as is used for splitting wood; let it be cut square at the end; use this to crush the fruit, in a similar way persons use a dasher in churning butter, and with no more force than necessary to burst the skins. The fruit, when thus prepared, is called *marc*, and is fit for pressing in this state—which must be done the following way: take press cloth—the form of which I will hereafter describe—double it and place it in a large wooden bowl; then put on the cloth as much marc as it will contain; when folded up, tie it round with a strong cord, and place it on the platform of the press, and press it with as much force as you please, the form and plan of which is not material, so that the largest quantity of juice is obtained; while one cloth is being used at the press, a second should be filled so as to save time, as it is very important that all the juice should be pressed out as soon as possible, after the first operation has commenced.

The juice of all the vintage having been expressed, carry it to the working tub in the cellar, and it is no longer to be called juice, but receives the name of *must*. This tub containing the must should be covered over with a clean linen cloth, and left undisturbed for twenty-four or thirty-six hours. If the night be cold, throw over it a blanket, but be sure to remove it in the morning, in order to keep an even temperature, which should be if possible not below sixty-five or above seventy-five degrees Farenheit (mine at the vintage is seventy-two degrees). You will observe, by the by, that the juice will require no other straining than it received at the press by passing through the press cloth; and by this plan both waste and much time are saved. The must having been allowed to settle, as di-

rected above, should now be drawn off into prepared casks, to work for ten or twelve days, according to the temperature of the weather at the time, and kept filled up morning, noon, and night for four or five days, after which twice a day will do. There must at the time of turning be sufficient spare must in reserve, say six gallons to every barrel after all the casks are full, and this should be kept near the cask, to fill them from time to time. The filling up must be done with an earthen or china pitcher having a lip, and at no time must any metallic article be suffered to drop into the must, as it is apt to injure the color of the wine, as well as to affect the taste. At the filling up always remove whatever scum may be at the bung-hole, and keep a small tub or dish under each cask, to receive the drippings, as the clear will do for filling up.

At the end of ten or twelve days the working will have ceased, which you will know by seeing the wine clear at the bung-hole, and the hissing noise stopped in the cask, and all floating beads disappear from the surface. If the wine (for recollect it is no longer must) show these indications, it has ceased working, and may be stopped in the following manner: set the cask upright, and place over the bung-hole a clean piece of paper; lay the bung on top, and press both into the hole as hard as you can with your hand, without any other instrument. This is mainly to exclude the air—see to it once a day, for three or four days, that it be not disturbed. At the end of that time place your ear close to the bung, and, if no hissing sound proceed from the cask, remove the bung, disturbing the wine as little as possible; fill the cask to within a fraction of the under edge of the hole, and drive the bung down tight; but should the wine at this last examination not have ceased working, the bung and paper should have been placed as before, and left three or four days longer.

The wine, thus being stopped down, will require no more attention till bottling time in the following March, and being about the time I think all wines should be bottled or transvased. If you conclude to keep it in cask a second year, it must be transvased, letting no more run from it than is bright and clear, the hullage or thick being turned into a smaller cask and fined for use. The cask you intend to bottle do in the following manner: remove the bung, or, my plan is to bore a hole through the bung with a large size gimlet (as starting the bung disturbs the wine), without disturbing the cask in the least possible. Let this be done, not twenty-four hours before bottling, which is the method most persons take, but about ten minutes, and see that everything has been got ready before, the cask having been tapped at the time of turning with a tight bottling cock, and four inches from the bottom of the cask, proceed to bottle, taking care only to draw off about two thirds. I have with me at this time a careful servant, as it is a business for two. I allow only about a dozen bottles to be filled before I commence to cork, giving only about ten minutes for the air to escape from the bottle, for if longer the boquet is much injured, and wine without or deficient in this quality is like a rose without fragrance. Your bottles should be filled to about one-third of the neck above the shoulder, and on no account suffer your corks to be soaked in any thing before being used, as they will shrink after from the wax, and perhaps cause your wine to spoil, whereas, if driven in dry, they will swell in the bottle, and the wax will adhere more perfectly. With this precaution I never lose a bottle of wine, as I generally attend to the old adage that anything worth doing at all is worth doing well. Reject all corks that are hard and porous. When all are corked, with a sharp knife trim off close down to the glass before waxing, after which pack in dry sawdust, in binns or casks in a cool cellar, with a uniform temperature, and in six months you may try it, but twelve will be better.

Having got through making and bottling, I will, before I conclude, say a word about casks, tubs, wax, &c. In regard to casks, I think it always best to buy new, and have them made of the best materials, and, as soon as brought home, filled up with cold water, and soaked thus twenty-four hours; then emptied and half filled with boiling water, shaken about and turned over two or three times during an hour, and while hot emptied and placed hole downwards forty-eight hours to dry; then sulphured in the following manner: melt stone sulphur in an iron sauce-pan, have ready strips of muslin twelve inches long and half an inch wide, dip them in the sulphur while hot (these are called matches), double two or three of them over the end of a wire, set fire to them, and let them down to the bottom of the cask at the bung hole, keep them burning as long as they will; repeat this as long as a match will burn, and when the cask is full of vapor bung it up tight, and

it is fit for the reception of wine, and will keep for months, so that before the vintage be ripe all the casks can be ready for use. The working tub should be large enough to contain all the must of the vintage, unless different colored wines are to be made, in that case separate tubs will be required. This tub should be placed in the cellar on a stand or strong bench high enough for the casks, at the turning, to be rolled under and filled at the spigot, placed one-fourth from the bottom of the tub, as performing the turning in any other way will be troublesome as well as wasteful.

Wax should be made in the following way: take one pound of resin and one pound of beeswax. with an ounce of pulverized Spanish brown, and melt them in a saucepan over a charcoal fire, keeping them stirred, and while hot the bottles are to be dipped so as to have about one-fourth of an inch of glass covered, as more is unnecessary. In bottling, every vintnershould be provided with a bottling-stool, which may be seen at almost any porter cellar, and without it the business cannot be well done. Across it you sit—the end forms a table with a rim to keep on your corks and driver; on it is fixed a thick soft piece of sole leather, on which to place your bottle for driving the cork; on the table also is fixed a cork-squeezer, for squeezing the cork two or three times before it enters the bottle, as this always should be done when corks are used dry, as they yield much better to the bottle and go further down. Fly press cloths are made with strong coarse linen, such as used by manufacturers in baling up dry goods Each cloth is made the size of a bed sheet. Linen is by far the best material, as it gives out no linty fibres as cotton or woolen will, and too much care cannot be taken to avoid all extraneous matter coming in contact with the must, as it is apt to excite and produce reactions, and cause dryness and sometimes sourness in the wine.

Transvasing.—I do not approve of this operation oftener than it can be helped, as it is merely to produce flatness as well as brightness in the wine, and mine is always characterized by the latter and never by the former quality; and I hope it will not be considered presuming when I state that I never drank any wine in my life, foreign or domestic, that posessed two of the richest qualities in the same degree that my wines have. My plan is never to transvase from the time it is stopped down until the March following; for as often as wine comes in contact with the air, so often does a great portion of the boquet and flavor of the fruit escape. Some may think that keeping wine so long without transvasing it would not come fine in time for bottling, but I have never yet had any to fail.

In speaking of the maul to crush the fruit, I named beach wood as the best, and such is the fact that in countries where wine is made in large quantities, and from various causes large quantities become thick and cloudy, and to resort to finings made from isinglass or whites of eggs, as we do, would be too expensive, they therefore take new beach wood and chip it up fine, dry it well in the sun, and from one to two pounds is put into a hogshead of wine, rumaged well with a broomstick, stopped down and left to settle, and it acts the same way as a more expensive mode. In making wine on a large scale the better way is to crush the fruit between two wooden rollers, horizontally meeting each other, turned with a crank.

J. Noyes.

Hollywood, Miss.

Prom the Albany Cultivator.

PIPES FOR WATER.

I noticed in the July number of the Cultivator the inquiries of a correspondent desiring information on the subject of laying water lime pipe to conduct water for common watering purposes, and asking what were the advantages and disadvantages of this kind of pipe as compared with lead pipe. As it regards the utility of leap pipe, I could say nothing from actual experience, never having used any; but should suppose from observation that water lime pipe was superior to lead for all ordinary purposes, where it is practicable to make it, having the advantage of cheapness in construction and durability, if nothing else.

I have had some experience in making water lime pipes, and can recommend them to any one who wishes to lay them, as being both cheap and durable. I will give my plan for making this kind of pipe, which I think is as good as any, or at least I know of no better. The tools necessary for this purpose are a common brick trowel, a mould, the size you want the bore of the pipe. This should be turned in a lathe perfectly smooth and round, and of equal diameter at each end. Its length should

be about two feet and a half, with a handle turned on one end, smaller than the rest, to draw by. The materials necessary in making the pipe are good water lime and coarse sand—the coarser the better, if sifted from the coarser pebbles. Have your drain dug to the required depth with a smooth bottom, and about eighteen inches wide at the bottom, so that there may be room to work with ease. In the middle of this drain dig a trench about four inches deep and from three to five inches wide, according to the size of the bore of the pipe, with a rounding bottom, if you choose, to save mortar. The advantage this trench has over the ordinary way of laying the pipe on the level with the bottom of the main drain will be seen at once. By using the trench you save considerable mortar and the necessity of waiting for the mortar to dry before drying the mould. If it were laid on the level, it would be nenessary to wait for it to stiffen before you draw the mould, or it would flatten out. Mix your mortar, one part lime and three parts sand; make it as stiff as you can and have it spread well.

When you are ready to lay your pipe, commence by spreading a layer of mortar an inch or an inch and half thick, in the bottom of the trench. This should be spread only the length of the mould at a time. Lay the mould on this spreading of mortar and then spread the mortar on the top and sides of the mould; press it down tightly, so as to fit the mould on all sides; smooth it off with the trowel on top, and lay down another spreading of mortar; then take hold of the handle of the mould and roll it around so as to start it loose, and draw it out to within three inches of the end—spread on another layer of mortar, and smooth it as before. So keep doing, until you have your pipe the length required. Be careful that you don't press with your trowel on the pipe above the end of the mould, or it may cause it to cave in, especially if the bore of the pipe be large. Let the pipe remain three or four days, until it gets hard and dry; then cover it up with earth. Be careful and not let any large stones fall on the pipe—they will be apt to crack it. A pipe properly made in this way will remain as perfect as long as it is kept from the frost.

R. A. Hutchinson.

Rogues in rags are kept in countenance by rogues in ruffles.

CULTIVATING STIFF SOIL.

The importance of pulverization, for stiff soils, can hardly be overrated; yet it is a matter which receives too little attention from farmers in most sections of our country, where this description of soil prevails. Considerable improvement has been made in the implements used in cultivating stiff soils, as regards their pulverization, though the best implements for this purpose are by no means common. Much depends on the plough, as to the effect produced on the soil—some producing much more pulverization than others. The first effort toward producing this effect should be to plough the land *fine* or in narrow furrows. But, in addition to this, some implement is needed which will, under any circumstances, reduce the hard soil to the requisite degree of friability. In England, an implement called the "clod crusher" is used for this purpose. It consists of series of iron plates, placed round a cylinder, with notches like deep cut saw teeth at the outer edges. The machine operates like a roller, and, being drawn over the ground, breaks down and pulverizes the lumps at once. We can see no good reason why such an implement should not have been brought into use in this country.

A writer in the Farmer's Magazine makes some interesting observations in regard to the improvements which have been made in the cultivation of stiff soils. He says:

"We need only reflect a moment on the principles which have to guide the strong-land cultivator, in preparing his soil for the seed, and compare the means he had of overcoming his dificulties, say twenty years ago, with what he has now, and we shall see how very different is his position rendered by the application of mechanical sciences. We speak not of his profit, abstract or comparative; but we cannot help being struck with the vast difference in his resources of meeting the difficulties of his position. Once he had to plough with three or four horses, and to cross plough with great labor and difficulty, and then to harrow with an implement which produced scarcely any impression on the stubborn clods—to plough and harrow, and plough and harrow, whenever he could, until perhaps he found it necessary to set his work people, in some seasons, to complete his operations with the mallet and the stone-hammer, to break the unruly clods. He had to *pulverize* and to *clean*—the one could

not be done without the other, and the former had to be effected somewhat in this manner: first the unctuous clay was cut in long longitudinal parallel pieces by the plough, and left on the edge to dry, being divided by a double wedge called a plough. This mass, being sufficiently dry to admit the treading of horses' feet with impunity, is cross-cut into large tubes, and these are subjected to the action of natural processes. The sun and air dry out all the moisture, owing to the large surface exposed to their action. The moisture abstracted, the clods begin to crack, and show here and there symptoms of fissures by the evaporation of the moisture, forming receptacles for the next rains, which one by one again swell out the particles, and slowly the whole is broken down into a friable soil."

He observes that the practice now is to follow the plough as soon as the soil is suitably dried, "with the clod crusher, or some similar powerful separator of clods, and, by once or twice going over the field, the soil is reduced to as fine a tilth as if it had undergone a whole summer's exposure."—*Albany Cultivator.*

DRAINING.

Professor Norton. in his new and able work upon "*Scientific Agriculture*," in treating of the subject of the mechanical improvement of the soil, has the following chapters:

The effects of too much moisture on the Soil.—"I come now to mention a defect in soils which is of very great importance, and which has not as yet been fully appreciated in this country. This is the presence of too much moisture. Wherever water is so abundant in the soil as to completely saturate it, various evil effects take place.

The necessary decomposition of organic substances is arrested, and certain vegetable acids are formed, called by chemists *humic, ulmic, geic acids*, &c. In swamps and low grounds generally, these accumulate to a large extent, and form the deep black soil or muck of such situations.

So long as these acids are present in such excessive quantity, valuable plants refuse to grow; but as is well known, when the muck is taken out and dried, it becomes a valuable manure: this is because air and warmth obtain access, and the process of decomposition goes on again. In order to avoid misapprehension, it ought here to be mentioned, that these acids in small proportions, are really useful in the soil, as furnishing a portion of their food to plants. It is the *excess* of them that does so much injury.

It is not only in swamps that this injurious formation occurs; there is much land that is too wet in the early part of the season, or in which are springs that saturate the surface; this land may be hard, and may even bear ploughing, yet still it is what farmers call *cold* and *sour*. These are exactly the proper words, for they truly express its qualities.—Considerable and injurious quantities of these vegetable acids are formed, and the water, by constant evaporation from the surface, produces cold; the grass is scanty and poor, while rushes show themselves in the wettest spots. There are large tracts of such land as this in almost every part of the country. Farmers think such land too dry for draining, and yet that is the only way to make any permanent improvement upon it. It is cold and late in spring, apt to bake hard in summer, and to suffer from early frosts in autumn. It is not in a fit condition to support good crops, and the only way to bring it into a good state is to dry it.

Some land is dry on the surface, but has a wet sub-soil: when the roots of the plants get down to this, they find at once injurious food, not only the acids already mentioned, but inorganic substances. The protoxide of iron is very apt to form in such places, and is at once fatal if the plant can find no nutriment in other directions. In this case too, *the only remedy is to drain*. The good effects of this operation on all soils suffering from any of the causes above mentioned, are very remarkable, and must briefly be specified before going farther."

On the changes which result from Draining.—"When the drain is made and covered, (for I always mean here covered drains) the water which falls upon the ground does not remain to stagnate, and does not run away over the surface, washing off the best of the soil, but sinks gradually down, yielding to the roots of plants any fertilizing matter which it may contain, and often washing out some hurtful substances; and as it descends, air, and consequently warmth, follow it. Under these new influences, the proper decompositions and preparation of compounds fit for the sustenance of plants go on, the soil is warm and suffi-

ciently dry and plants flourish which formerly never would grow on it in perfection at all. It is a curious fact, too, that such soils resist drought better than ever before. The reason is, that the plants are able to send their roots much farther down in search of food, without ever finding any thing hurtful. Every part being penetrated with air, and consequently drier and lighter, these soils do not bake in summer, but remain mellow and porous. Such effects cannot, in their full extent, be looked for in a stiff clay during the first season; the change must be gradual, but it is sure."

From the Southern Cultivator.

SCUPPERNONG GRAPES.

Mr. Editor,—I observe that a correspondent in your September number desires information in relation to the Scuppernong Grape. This vine may be planted from 1st December to 1st of April, but from December to February is the best time. The vine should be well rooted, and from 6 to 8 feet long. Let the ground be prepared by digging some six or eight feet square, say eighteen inches deep, fill this with trash, such as old hats, bones, shoes, iron hoops and brick bats, to within three inches of the ordinary surface; on this spread three inches of rich earth or compost free from heat, on this plant the vine, spread the roots so that they do not cross each other, then cover over about three inches deep with good earth, and dash on with some force a pail or two of water to settle the earth about the roots. This done, place a stake firmly in the ground and tie the vine to it, and see that the vine does not fall to the ground. Keep it free from grass; if the summer be dry some weeds or grass may be put about the roots, or watered. The second year the vine must be trellaced or receive such other support as the cultivator may select for it. Care must now be taken to train the vines in such a manner that they do not run together and become tied by their own claspers, but must be tied apart to prevent the wind from matting them. The distance between plants should be from twenty to forty feet. The soil must be dry, and after the vines are four years old very little manure will be necessary.

If planted deep the vine will die, and if the ground be wet the vine will not prosper. Select such ground therefore as can be drained, if not naturally dry. By observing these directions the cultivator cannot fail of having a good growth of vine and plenty of fruit. I prune regularly every year after the fourth year, to prevent too much foliage, and to let in sun and air. This vine is extensively cultivated in this vicinity, and wine of excellent quality made from its fruit.

Respectfully, your obedient servant,

CHESTER ROOT.

POTATOES AND TOMATOES.

It is not so generally known as it deserves to be that the tomato, when grown among corn, is far superior in flavor to those produced in the common way. They must of course have a fair chance of room to grow, and not to be too much crowded by the corn. Those who can appreciate the good qualities of this vegetable when in perfection will find this mode of growing them to secure all they can ask; at least, such has been my experience.

It is maintained by some respectable experimenters, that potatoes planted among corn are not so liable to rot; and this opinion has been confirmed by a sufficient number of trials to render it worthy of attention.

The soundness of potatoes in these cases, and the superior flavor of the tomatoes mentioned above, are probably owing to the same cause, which is that corn, from its superior powers of attraction and assimilation, approximates to itself the soluble nitrogenous matters contained in the soil, and thus prevents the less energetic plants in its neighborhood from absorbing those compounds of nitrogen which experience has shown to be injurious to the quality of their products. The best potatoes are those which contain the largest proportion of starch, and this is but carbon and the constituents of water in another shape. Azotized manures, which are found so essential in the cultivation of grain, are, on the contrary, detrimental when absorbed into the circulation of a plant which does not require them for the perfection of its product, and which is, in fact, unable to digest such concentrated nutriment. Every one knows how much inferior the sweet potato becomes when grown on clay soil; and Liebig speaks of a peculiar kind of turnip, which under the same circumstances, loses all the good qualities for which it is noted when cultivated in sandy land.

Those plants in which compounds of car-

bon predominate may be said to form a lower grade, in the scale of vegetable life, than that occupied by those containing more nitrogen. The former are the unassisted products of nature—the forests and the wild grasses with which a fertile country is covered, before the busy hand of man has entered upon its labor; and the latter are the golden harvests which his skill and industry secure, to increase his comforts or add to his wealth.

A portion of nitrogen is undoubtedly necessary to all vegetables, but it is equally certain that we sometimes apply more of the substance than is required to produce the best results. If we admit, with Liebig, that "plants absorb all the soluble matters present in the soil, as a sponge absorbs water with all that it contains in solution indiscriminately," we must be impressed with the importance of adapting the supplies of food to the necessities of the plant, and of withholding, as far as possible, that which is useless or detrimental.

It is said of the Chinese that they manure the plant more than the soil; and certainly, to do this understandingly and effectually, implies the perfection of the highest accomplishment within the ambition of a scientific farmer.—*Working Farmer.*

NEW WORK BY PROF. LIEBIG.

We are indebted to West & Brother, booksellers under the Exchange Hotel, for a copy of Prof. Liebig's new work (some fifty pages) on "the motion of the juices in the animal body; and the effect of evaporation in plants." This work has been translated and edited by Dr. Gregory, Professor of Chemistry in the University of Edinburgh. Whilst treating of a difficult subject requiring close research and the frequent use of scientific terms, the illustrations are such as to interest the general reader. The cause of the potato disease is fully discussed, experiments stated, and a method of prevention recommended. In summing up the method proposed by Dr. Klotzsch, it is said that "the chief points to be attended to with a view to the desired object, the increase of tubers, is first to increase the power in the roots, and second to check the transformation which occurs in the leaf. We obtain both ends simultaneously, if in the fifth, sixth, and seventh week after setting the tubers, and in the fourth and fifth week after planting out the germs furnished with roots, or at a time when the plants reach the height of six to nine inches above the soil, we pinch of the extreme points of the branches or twigs to the extent of half an inch downwards, and repeat this on every branch or twig in the tenth and eleventh week, no matter at what time of day. The consequence of this check to the stem and branches, is a stimulus to the nutrient matters in the plant in the direction of the increase, both of roots and of the multiplication of the branches of the stem above ground, which not only favors the power of the root, but also strengthens the leaves and stalks to such a degree, that the matters prepared by the physiological action of these parts are increased and applied to the formation of tubers, while at the same time the direct action of the sun's rays on the soil is prevented by the thick foliage and thus the drying up of the soil and its injurious consequences are avoided."

From the Albany Cultivator.

SMALL POTATOES FOR PLANTING.

Eds. Cultivator,—In your paper for January, 1849, I found an article, from which the following is an extract. You will republish the extract here, or not, as you think best. I think your readers may be benefited by having their attention turned to the subject again:

"Eds. Cultivator,—It has long been a prevalent opinion with our farmers, that seed potatoes should be selected from the largest and best. But a gentleman of my acquaintance, the owner of a large farm in the county of Worcester, in the spring of 1847, found his stock of large potatoes completely exhausted, and from the general scarcity could not renew his supply. He then determined, from necessity, to plant his fields with small ones, varying in size from a marble to a small pullet's egg, placing two or three without cutting, in each hill. The result was an unusually fine crop, in size, quantity and quality.

In the spring of 1848, he repeated the experiment, so far as to plant alternate rows of small ones and large ones, cut into four or five pieces. I was present when he was harvesting the crop, in the early part of October, and it was evident that the produce of the small potatoes exceeded

that of the larger ones. Should further experiment confirm the fact, that the small are of greater, or even of equal value for seed, it will be of some importance to farmers. M. B.

Beverly, Mass. December, 1848."

As the writer says—"It has long been a prevalent opinion with our farmers, that seed potatoes should be selected from the largest and best." But who has before made a fair experiment to ascertain the facts? Since reading what your correspondent published, my attention has been turned to the subject, and held to it, by my observation and experience in cultivating the sweet potato. It is the common practice, as far as my observation extends, to save and use the smaller of the sweet potatoes for planting. And from five years' experience and observation I have obtained no evidence that the practice causes deterioiation, as to size or quality.

During the past season I have made an experiment with other potatoes, using the kind, or variety, called the Neshannock, or Mercer. Side by side, on ground treated alike, and of like quality, as far as it was possible to have it, we planted large potatoes and small ones, separated from each other. Both were planted on the same day, tilled on the same days, and harvested on the same day. The result is, quite as large an amount, and quite as good quality, from the small potatoes used in planting. Our son, M. M., in my absence, dug an equal number of hills, in parallel rows, and called on me to decide between the heaps. I decided without hesitation, as to the amount and size. His mother was then called on, and her ready decision agreed with mine. Our decision was in favor of those which he said were dug where the smaller were planted. We then went on and dug the whole. The result agreed with the appearance of the heaps first dug.

It might seem to some like exaggeration if we should say the potatoes were more and better from the small ones planted. We say that the quantity was not less. We think the proportion of small potatoes *was* less from the small potatoes planted, than from the large ones.

There is not the slightest ground for conjecture that any mistake has been made. My own eyes have been on the work, and my own hands in it, from beginning to end—with the exception of the digging of the hills in the parallel rows, by my son, as before mentioned. At the time of planting, the stakes were set, and the facts were written down. All has been done with a carefulness that leaves not a doubt.

It is proper to say here that the contrast in the size of the tubers planted was decided. I think that not more than one fourth, or at most one third, of the amount in weight, was planted where the smaller were used. Of the large, only one potato was used in a hill, the hills being about three feet apart each way. Of the smaller also only a single one was used, except with the smallest, when two were used, the hills being at the same distance with the others, about three feet apart each way.

The subject is worthy of attention. If equal quality and quantity can be produced, on equal ground, from the smaller of the tubers, it is time to have it known. Hitherto it has been thought to be otherwise. I confess that I am now looking for more general experience to confirm us in this new view. In propagating plants from seeds, I should still say, all other things being equal, let us have the largest seeds. But propagating the potato from the tuber, (or what one writer has called a sprout, and others would perhaps call a germ,) is another process. If we can obtain as good a plant from the smaller tuber as from the larger one, it is what we all need to know. I need not enumerate the advantages. They are apparent.

ORSON S. MURRAY.

Warren Co. O. Sept. 1850.

From the Dollar Newspaper.

TO TAKE HONEY FROM BEES.

The common practice of killing the bees, in order to obtain the honey, few can witness without some little compunction; and as there is a very simple method of effecting the object, without any injury to this most interesting little animal, which on the score of interest, as well as humanity, claims regard, I beg leave to communicate it through your paper, should you deem it worthy of a place in it.

In the evening, when the bees have retired, take the hive gently from its stand, and having spread a table cloth on the ground, set the hive gently on it, placing something under to raise it three or four inches; then draw up the corners of the cloth and fasten it tight around the middle of the hive; then raise the lid of the hive a little and blow in the smoke of a cigar, a few puffs of which will drive them down. Continue raising the lid gradually, blowing in the smoke all around, and in a few moments it will be found that they have all

gone out of the hive. You may then take off the lid and cut away as much of the honey as you think proper. If the operation be performed in July, you may take nearly all, as there will be time enough to provide a sufficiency for their support during the winter.—As soon as you have taken the honey, put on the lid, loosen the cloth and spread it out, and in an hour or two, the bees will have returned into the hive. It may then be replaced on the stand, and on the following day, they will be found at work as usual.

This is the shortest, best, and most simple way of getting honey from a hive of bees that I have ever seen, tried, or heard of.

PLOUGH BOY.

West Chester, Pa. July, 1850.

From the Wool Grower.

ECONOMY OF MANURES.

We clip the following article "On the Economy of Manures," from a very valuable English paper, "The Gardener's Chronicle." It will be found to contain a great deal of practical truth, and we have selected it particularly, because it abstains from all newly fashioned, scientifical chimeras and humbugs, in regard to the theory of manure, but shows the true value of the very fundament of every farmer's wealth, that of his own manure heaped up in his own dung-yard. It will be read with interest, by all that understand and have an interest in a lasting and speedy improvement of their farming grounds.

On Wednesday, July 31, a lecture on this subject delivered in the Trades' Hall, by Dr. Anderson, the chemist of the Highland Society. He said: It has appeared to me that the present affords an advantageous opportunity of calling your attention to questions which must unquestionably depend for solution on the mutual exertions of science and practice. For I hold it to be certain that the two go together, and that though some of the facts we require may be determined in the laboratory, there are many questions which, though suggested by science, can be established only as facts by experiments in the field, performed with every attention to care and accuracy. I hold also that neither of these methods of experiment will in themselves suffice; they must go hand in hand, if our results are to be of value.—Separately the chances are that they lead to mere speculations, of which science will supply one set and practice the other; for you must allow me to say that practice has abundance of speculation of its own, which are often much wilder than those on which science ventures. In discussing the general questions of the economy of manures on the present occasion, I must be contented to do so in a very general manner, as your time will not permit me to go into details, and I shall advert, in the first place, shortly to the general properties of manures. If we examine then any of our common plants, we find it to be composed of a considerable number of chemical substances. These substances may be divided into two great classes, separable from one another by a very simple experiment, which is neither more nor less than burning the plant. When this is done we obtain its ash, containing the whole of one of these classes; the other has in the process of burning passed into the state of gases, and so escaped the observation of our unassisted senses. The former of these are called the mineral or inorganic constituents, because they are peculiarly present in all organized beings. The latter of these classes is a limited one, and contains only four substances—carbon, hydrogen, oxygen, and nitrogen. The former is much more extensive, and comprehends a considerable number, of which the most important are sulphuric acid, phosphoric acid, lime, magnesia, potash and soda. Now the existence of the plant depends upon its obtaining all these, as well as one or two less important substances, in sufficient quantity; without these it cannot flourish, and just in proportion to the amount in which they are supplied will be the luxuriance of its growth. I say the growth of the plant will be proportional to the supply of these constituents.—This statement however is not to be taken in its widest sense, because Nature has fixed a certain limit beyond which no supply of these substances, however liberal, will raise its growth, but up to that limit the statement is substantially correct. From whence, then, is the plant to derive these substances? And in answering this question it is necessary to distinguish between the two classes of substances to which I have already referred, and to inquire separately into the sources of each.

Of the inorganic constituents there can be but one source, the soil, namely, which to be fertile must contain the whole of these substances in greater or less quantity. It is different, however, with the organic constituents, which have a two-fold source, and of which part, or even the whole, may be derived from the surrounding atmosphere. The atmosphere is in fact a great reservoir of the organic constituents of plants, of which it contains all four; two of these, nitrogen and oxygen, forming almost the whole of it; the other two, carbon, hydrogen, existing in smaller proportion in the forms, respectively, of carbonic acid and the vapor of water. It must be understood, however, that all soils contain a certain quantity of the same substances, in the form of what is called organic matter, in a state in which all these four substances may be supplied to the plant. Now every fertile soil contains all the constituents of the plants which

grow upon it, and that too in sufficient quantity to supply many successive crops, a position which I have had recently an opportunity of illustrating in a very complete manner, in a series of analyses of the wheat soils of Scotland, published in the last number of the Highland Society's Transactions. I have there shown that even nitrogen, of all others the element which we should least expect to find in them in abundance, nevertheless exists in what must be considered a comparatively large proportion. But it is important to observe that it is not enough that these substances shall exist in the soil; it is further necessary that they be present in a state in which they can become available to the growth of the plant. Now, to provide for this, Nature has introduced an extremely beautiful and important provision. In order that those substances shall be absorbed by the plant, they must exist in a soluble condition. It is, however, very manifest, that if the whole valuable constituents were soluble. the good effects of such an arrangement would be altogether defeated, for the rains would soon wash away from our soils all that they contained of valuable matter. To obviate this, however, Nature has so arranged it that these constituents exist in the soil in the state of insoluble compounds, which under the influence of air and moisture, gradually undergo a series of very complex decompositions, which slowly liberate the constituents, as they are required to support the life of the plant. But Nature has fixed a limit to this change, and has caused these constituents to become soluble with extreme slowness only, and in no greater quantity than is requisite for supporting that amount of vegetation which the general economy of the globe requires.

Now the whole principle of cultivation is to obtain by proper treatment from a given surface of land a greater amount of vegetation than it is capable of producing in a state of nature. And this is effected partly by tillage, which breaks up the land, and by the admission of air and moisture facilitates the decompositions, by which these valuable constituents of the soil are liberated from their insoluble state. The other and far more important means is by the addition to the soil of those substances which the plant requires; in other words, by the use of manures. A manure, then, ought to contain all the substances which a plant reqnires for its growth. And this is unquestionably what a manure of theoretical composition should do. Nay, more, it ought to contain these substances exactly in the proportion which the plant requires, so that no waste may occur. It must, however, be manifest to every one acquainted with agriculture, and still more manifest to every one acquainted with chemistry, that it is impossible to carry out practically what is true in theory: nevertheless, the aim of skilful and scientific practice ought to be to approach as near to theoretical perfection as it is possible to do, though in the very nature of things we cannot even hope absolntely to arrive at it, or even near perfection, we may advantageously aim at a somewhat lower and less difficult standard, for experience and science concur in showing that all the constituents of a manure are not as equally important, but that those are most essential which the plant has greatest difficulty in obtaining from other sources. Now, in this point of view, nitrogen is the most important of all the constituents of a manure, because it is that which Nature supplies least abundantly. You may possibly express some surprise at this statement, considering that I, not many minutes since, mentioned that it is at present in enormous quantity in the atmosphere. But it so happens that nitrogen is exactly of all others the substance which most peculiarly requires to be presented to the plant in a special condition It has been established on most unequivocal evidence that the plant cannot absorb nitrogen as such, and that all this immense mass of nitrogen existing in the air is not strictly useful to the plant, while it is only a very minute quantity existing in it, in the state of ammonia, which is of immediate value. And of the immense disproportion between the amounts of nitrogen in what I call an inert and active condition, some idea may be formed when I mention that one hundred pounds of atmospheric air contain about seventy-seven pounds of nitrogen, and according to a recent determination, not more than one-half of a grain of ammonia.

Next to ammonia in importance may be placed phosphoric acid, which is likewise a comparatively rare natural product, and of which also the great source in animal and vegetable sources, all of which, but especially animal substances, contain it in quantity. It is true that it is found also in the mineral kingdom; but it exists here so sparingly, that as yet scarcely any advantageous use has been made of that which is obtained from this source. You will observe, then, and it is a matter of great practical importance, that the principal source of the two most important constituents of plants is from plants themselves; for even that portion obtained from animals comes originally from the plants upon which the animals have fed. And the same may be said of potash, of which the great source is still from plants. This is a point which I wish to impress particularly upon you, that plants form the great source of these substances; and that this is true, not merely of these substances as manures, but even when you go into a druggist's shop, and buy pure ammonia, phosphoric acid, or potash, every atom which you get has at some time or other existed in a plant or an animal. These observations lead me directly to the consideration of that manure which consists of the decomposing portions of plants, and that, of course, is farm-yard manure, the most important of all, upon which the farmer must always be mainly dependent, and. I think I may also say, that regarding the economical manage-

ment of which we have the least amount of definite information. I beg it to be understood as my decided opinion, that farm-yard manure must always be the farmer's main stay.

Some people still seem to expect that some complete substitute will be found for farm-yard manure. I can assure you, however, that any such supposition is utterly extravagant, and is certainly uncountenanced by chemistry. I do not mean to say that chemistry could not produce a substitute; but what I mean is, that the farm-yard manure must always be much cheaper than any substitute which could be manufactured, and the reason is to be found in the fact, that the constituents of such a manure must be extracted from plants, which must necessarily be expensive. While even supposing that to be done, farm-yard manure must, in the very nature of things, still always be produced. No question can then be conceived of more importance than that of obtaining this manure in its most perfect state; but how that is to be done is exactly one of those questions still unsettled, and which I believe to require very complete and careful field experiments. The exact chemical estimation of the comparative values of different specimens of this manure is a very difficult matter; partly from the many questions it involves. Of course, good farm-yard manure will contain more or less of all the constituents of our crops; but, in estimating its value, we must be contented to take into consideration only its most important constituents, and, in this way, I conceive we may obtain a sufficiently near estimate, by knowing the amount of nitrogen and phosphoric acid which it contains; but of these, for many reasons, the first is by far the most important, as it is in respect to it that the value of farm-yard manure appears to vary most. In the management, then, of farm-yard manure, two different questions require to be considered - first, the production of a manure containing the greatest possible amount of nitrogen; and, secondly, the successful conversion of that nitrogen into ammonia. It is not unimportant, of course, that the other constituents of the manure should be present in abundance; but it may be assumed, as generally true, that the treatment likely to produce the greatest amount of nitrogen will be that which will produce the most valuable manure in other respects.

In regard to the first of those questions, there is little information. It is a common statement, however, that the value of the manure is dependent upon the nature of the food with which the cattle which produce it are supplied; that, for instance, cattle fed upon oil-cake produce superior manure to those fed on turnips. I am aware that this opinion is not universal, as I have heard it disputed by farmers of skill and experience. I am inclined, however, to believe that the opinion is, to a certain extent, correct. Supposing, then, that two samples of such manure differ, it must be obvious that it is the dung and urine of the cattle which differ; the litter mixed with such dung will be the same in both cases. Now, some experiments made in the laboratory, on the pure dung and urine of cattle fed on turnips and oil-cake, appeared to me to confirm the opinion of the greater abundance of nitrogen in the produce of animals fed with the latter food. It will not do, however, to draw conclusions in such cases from a single analysis, so that I was anxious to have repeated and extended the experiments, but circumstances not within my own control have hitherto prevented my doing so. I would beg you, however, to observe that supposing it to be made out distinctly that farm-yard manure produced by oil-cake contains more nitrogen than that from turnips, still this would not embrace the whole question. It would if you were to buy the manure, when, of course, all that you want is to get as much nitrogen as possible in the one hundred tons or any other quantity which you may wish to buy. But it is quite another thing when you come to produce the manure on your own farm. The question then is, not whether one hundred tons of the one contain more nitrogen than one hundred tons of the other; but whether the whole quantity of nitrogen produced by the one method of feeding is greater than the whole quantity of it produced by the other. Now, we have no experimental information on this point; but I think it may be doubted whether in this point of view there is any such difference, because you will observe that though oil-cake contains more nitrogen—in fact, two and a half times as much as turnips—still there is a much greater disproportion in the qualities of these substances with which you supply the cattle. You give an ox daily one hundred weight of turnips, but no one gives fifty pounds of oil-cake daily, but more nearly three pounds: so that, in fact, the ox fed on oil-cake actually on the whole receives less nitrogen than when fed on turnips To pass then to another question—supposing cattle to be fed in exactly the same way, so as, in fact, to produce manure, which at the moment of formation is of uniform quality, what are the circumstances under which that manure can be preserved with the least loss of its valuable matter? As regards the general question of the preservation of manure I apprehend that the most important matter is its protection from air and moisture. In the way a common dung-heap is made, we have, in fact, exactly the condition to occasion a loss of its valuable constituents. It is exposed to a more or less free current of air, which facilitates the volatilisation of the ammonia as it is formed and it is exposed to the falling rain, which washes out the soluble salts, and what ammonia the winds have spared, into the subjacent soil. It is true that the former of these sources of loss can be got the better of by the use of acids or of gypsum and mixing with earth; but when the ammonia is thus fixed, as it is said, it is only as regards volatility, for it is still soluble, and liable

to be washed away by rain. In order to have farm-yard dung in the best state, it must be preserved under cover, and my impression is that the introduction of covered dung pits is likely to prove of great importance. There seems to me no doubt that in this way manure, in whatever way produced, must be best preserved. There appears, indeed, to be but one objection, which is, the expense of erecting a roof of sufficient extent to cover the whole manure of a farm. But surely, in these days of cheap building, some sort of inexpensive cover may be contrived. In order to ascertain this, we should have to ascertain by actual experiment what is the amount of gain by having the manure under cover, so as to know whether it is sufficient to leave a profit on the expense of covering it. We have another matter to attend to also, in the management of farm-yard manure—namely, its fermentation, by which is meant the production of such decomposition as converts the nitrogen present into ammonia. The importance of this decomposition depends upon the fact that by this means we obtain a manure which acts with greater rapidity than one in which this decomposition has not been effected. The fact is, that the formation of ammonia takes place much more slowly when it has been incorporated with the soil than when it is heaped up in the dung-heap; and, as the nitrogen must pass into the state of ammonia before it is absorbed by the plant, we require to effect as much of that change as possible, if we are to have a manure of rapid action.

He had referred hitherto solely to natural manures, and he had laid before them his view that no artificial manure would ever prove a substitute for that of the farm-yard; but though that was the case, they might be, and he believed were, most important auxiliaries. Let them take the commonest kind of artificial manure—he meant, of course, guano—the finest quality of which was the cheapest and the best of the class. He said the cheapest and the best; and it must necessarily be so, because the constituents which were of greatest value to the agriculturist were given in it in a larger quantity than they could be got in any other compound for the same money. His advice then would be to buy the best guano—never purchase inferior. The inferior was greatly more expensive. The decrease in the money value for which it might be obtained was nothing to the decrease in its valuable constituents as compared with the better sorts. The Peruvian was the best kind of guano, and it was by far the cheapest.—Farmers were exposed to much risk of imposition in this matter; adulteration was carried on to an extent which it is difficult to credit. He had recently gone over the number of samples of guano that had been forwarded to the office of the society for analysis, to the number of thirty cases, and he found that out of that thirty there had only been nine samples of such a quality as he himself, if purchasing, would have been disposed to accept. And this gave no accurate idea of the proportion of good to bad guano that was in use. Numerous samples of good guano came to the office, but few of those that were thoroughly adulterated, because the venders of such took care to keep as far as possible out of the reach of the chemist. Let them take guano of the best quality and they would find that two things entered largely into its composition, viz: ammonia and phosphoric acid, the two substances, as he had previously stated, the presence of which was most valuable in farm-yard manure. Now in Peruvian guano they would find about seventeen per cent. of ammonia and of phosphate of lime, a compound of lime and phosphoric acid, twenty-three, twenty-four, twenty-five per cent. according to circumstances. In inferior guanos there might be found twenty-three or twenty-four per cent. of phosphate of lime, and one or two of ammonia; and, this, instead of being sold at one-third of the price of the other, as it should be, was sold generally at two-thirds. Guano might be considered as the type of a class of manures, and bones might be taken as belonging to it also. The value of that kind of manure was dependent upon two conditions. Some used burned bones. Now, in certain circumstances, that might be advantageous. The addition of phosphate of lime might alone be needed to certain soils. Such a case occurred in the pasture land of Cheshire. The application of bones to that exhausted soil operated almost as a charm upon it. The peculiar nature of the tillage under which it had been kept—all the butter and cheese raised upon it being conveyed elsewhere—reduced it to that state that the addition of phosphate of lime acted powerfully, and was indeed eminently beneficial. But in general such would not be the case, and therefore they should give the preference to bones that were unburned. There was another instance of a similar kind to which he might refer. In many cases he believed that bones were sold from which the glue had been extracted by boiling. This glue was a valuable commercial product. It was used in weaving, for stiffening yarn and other manufacturing purposes; and several manufacturers had large boilers in which the glue was extracted. The bones were sold afterwards at no diminution of price from that of unboiled bones.

EARLY RISING.

Are you poor? you will probably forever remain so, if you habitually waste the precious hours of the morning in bed. Who will seek the labor or services of him who sleeps and doses in the morning until seven or eight o'clock? If such a person is poor, he must remain poor. "He that would thrive must rise at five." The poor can ill afford to lose daily two or three hours of the best portion of

the day. Economy of time and diligence in business, are virtues peculiarly appropriate to those who depend upon their earnings for the means of subsistence. Allowing twelve working hours to a day, he who by rising at eight instead of five o'clock in the morning, thereby loses three hours' labor daily, parts with one-fourth of his means of supporting himself and family: ten years' labor lost in the course of forty years!—*Boston Cultivator.*

COTEMPORARY AGRICULTURAL PUBLICATIONS.

Most of our cotemporaries whose volumes closed with the year 1850 have put forth prospectuses announcing improvements to be made in their pages. They all speak with confidence of largely increased subscription lists. We find in this an additional inducement to endeavor to improve the Southern Planter, and again call upon the men of the South and of Virginia *to stand by their own journal*, which is owned, edited, set up and printed by men reared amongst them.

The "New England Farmer" is hereafter to have a weekly edition, besides its present semi-monthly. Published at Boston, and edited by S. W. Cole.

The "Massachusetts Ploughman" continues to put forth many valuable articles, the most sensible of which are some we have recently seen, wherein resistance to the fugitive slave law is strongly denounced. W. J. Buckminster, Editor, Boston.

The "Magazine of Horticulture" is also published at Boston, monthly, at two dollars per annum. Hovey, who has given his name to a particular species of strawberry and several varieties of fruit, conducts it.

The "Culturist and Gazette," a weekly, published in Pittsfield by Professor Reed, completes the list of agricultural journals in Massachusetts.

From New York, we receive the Horticulturist and Cultivator issued from the same office in Albany, and the journal of the State Agricultural Society, printed in the same city; the Wool Grower, Buffalo; the Genesee Farmer, Rochester; the American Agriculturist (Solon Robinson's demi-shadow); Professor Mapes' Working Farmer; the Scientific American, and the Farmer and Mechanic. These journals, taken collectively, circulate about ten thousand copies in the State of Virginia, as has been estimated by those qualified to judge.

We are not aware of the existence of any monthly agricultural journal, strictly speaking, in Pennsylvania. Bowen's North American Farmer is published once a week in Philadelphia, whence also comes the "Dollar Newspaper" with a few columns for farmers. The Germantown Telegraph also contains much original matter of the same character. Mr. Skinner's journal, "The Plough, the Loom and the Anvil," continues to be printed with the same neatness and to be edited with the same industry and zeal.

The American Farmer, of Baltimore, has been recently enriched by a number of essays from the pen of Edmund Ruffin, Esq. The last number contains the address of the Hon. Willoughby Newton, at the State Fair. We shall notice it in the Planter.

The Ohio Cultivator, Columbus, is to appear in a new address; and the editor is going to London to attend the World's Fair, should his subscription list be sufficiently enlarged to justify it.

A new journal, at one dollar per annum, is to be established at Columbus, Ohio, under the auspices of the State Board of Agriculture. It is to be called "The Western Agriculturist," and to be edited by Prof. Mather, State Chemist.

The practice of copying articles from the agricultural journals is becoming more and more prevalent among the newspapers published in the interior. And we are glad to see it, though not for the reason which some of our well wishers(?) have given. Several have given as a reason for not taking the Planter, that they read much of what we publish in other papers for which they do subscribe. Now, whilst this course is friendship for us, over the left shoulder, it is on the part of those who adopt it what we should call dining at the second table. They get what is chosen for them by a second caterer, who is but too often circumscribed by the length of a political document, the breadth of his sheet or the convenience of his foreman. The newspaper, too, is soon torn or lost, whilst the periodical is preserved and may be referred to whenever desired and its pages consulted at each succeeding season.

For the Southern Planter.

COLD MOUNTAIN.

Having rented out my farming lands and given away my slaves, I have at sixty years of age come to the Cold Mountain to live — Here I intend to spend the remainder of my days in the peaceful occupation of herdsman. But "shall old acquaintance be forgot?" No, never—so take my dollar, friend Gooch, and mail the Planter as heretofore. And anon I will write for the Planter too; but in so doing I shall try to avoid such words and wind as many persons use by way of ballast. If the vessel be loaded with goods, there is no room for ballast; and if the goods be valuable, out with them, although the boxes may be put together roughly. But in admonishing others, I take the hint myself—amen.

This communication is intended principally for the benefit of those who may determine to settle high mountain lands. Although my present home has known the sound of the axe for only three years, yet I am interested in other lands near at hand, which have been in grass for twenty years; so I think I am qualified to speak to the point. First, I will speak of my locality. Let one, standing on the Peaks of Otter, cast his eye about N. 45 E and he will see the Bald Nob, about twelve feet above him. About a half degree to the right of this, he will see a peak exactly on a level with his stand; and this is my home, or within my walls. About one and a half degrees to the right of this is Mount Pleasant, which is the highest mountain in Virginia, and about twenty-five feet above the Peaks of Otter.

In the spring of 1847 I began operations at the foot of the Cold Mountain, by cutting the bushes and girding the trees. The bushes were cast into piles, and burned when dry, and the trees were girded by merely cutting off a narrow band of bark. Whilst cutting I had on the land cattle sufficient to keep down the sprouts, which here are excellent food. I make it a rule to cut annually as many acres as I have cattle on the land, and I find the rule works right. My first year's cutting was sowed with Kentucky blue grass in the latter part of summer, but this was wrong, for the following winter's frosts cast out about two-thirds of it. In the fall of 1847 I cut some twelve or fifteen acres on the top of the mountain, most of which is now a good sod of greensward, although no seeds had been sown. Since this, I have cut the balance of the mountain's top, and the greensward is making its appearance throughout. One portion of my cuttings I let stand one year before sown in grass seeds.—This was wrong, for the sheep sorrel and cinquefoil had got a foothold, to the injury of the grass. Another portion I cut in the fall and sowed on the snow in March. This is the best grass I have. But the greater portion of four hundred acres enclosed, is yet in weeds, which are excellent food for cattle. The poorer the land the more bushes, the richer the land the fewer bushes. So soon as the trees are dead, the ice and winds of winter begin to break them down, and if not quite thick on the ground they lie untouched, to moulder into dust; but where too thick for the convenient movement of cattle, two or three logs are cast together, and being dry they burn freely. Any flint corn can be grown here to perfection, but until the land has been tilled two or three years the crop is not profitable. I would, therefore, recommend rye and oats for at least two years, and then corn, to be followed by rye or oats and grass. But little corn, however, will be wanting on my premises, or any other intended for like purpose. In the summer of 1848 I sowed a small quantity of plaster on the top of the mountain, from which no effect is yet visible. Next spring I intend to sow a ton of plaster on my garden and a meadow at the base of the mountain, and shall note the effect, if any.

And such is my home, where, by frugality and exercise, I hope to live and move at the age of one hundred years. Here I can live in peace with God and man—above envy—above suspicion—above disease. Finally, let him who has made a competency, and desires to live out his lifetime, come to me, and I will show him a goodly place. I say, come to the Cold Mountain for rich land, splendid scenery, a long life, peace and plenty.

ZA. DRUMMOND.

Amherst, January, 1851.

BONE-MILL IN RICHMOND.

During the past year the grinding of bones for fertilizing purposes has been commenced in this city. We will give some account of it.

The stranger who is unacquainted here must know that the different suburbs and localities of the place have distinct names by which they are severally designated. He will then, should he wish to see the bone-mill, inquire for that portion of the environs called "Horse Heaven." Horse Heaven is situated upon the stream which passes through a culvert under the Mechanicksville turnpike, shortly before it reaches the city. He will see a rough shanty-looking sort of building, with high enclosure around it, and there the process of converting bones into dust is carried on. The power used is horse, and two are required when the supply of bones is adequate. This, however, is not always the case.

The bones are placed in a hopper, with a solid iron bottom, and subjected to the power of four hammers—two of fifty-six and two of

one hundred pounds each. These hammers are mere weights, so shaped as to give the greatest possible power by their descent. They are attached to upright pieces of timber which play through a frame-work some seven or eight feet above. They are elevated by cogs placed at one end of a horizontal shaft, the motive power of which is at the other end. The bones not crushed sufficiently fine are thrown into another part of the fixture which resembles the ordinary bark-mill. They are scattered along the margin of the circle around which the horses walk. This margin, or bed, as a miller would say, is composed of solid iron, and over it rolls an old millstone, made fast through the eye to the lever, at the outer end of which the horses are hitched. At the top of the vertical shaft to which the inner end is attached, there is a wheel giving motion to the horizontal shaft, mentioned above. When thus crushed they are shovelled out to the main heap, where they undergo some fermentation. The price at which they are sold is fifty cents per bushel.

No pains seems to be taken at this mill to separate the different qualities before grinding, although it is well known that wide differences in value do exist. The Northern demand, both for ground and unground, is considerable. At the more extensive bone-mills there, no part is suffered to be lost. The button-makers take what suits them; the glue-makers have the horns and the hoofs; other trades get their part, and even the hog comes in for his share of the swill. Hence what is sold there to farmers for manure can be afforded at a cheaper rate than here. It is *their* business, however, to inquire into and understand whether they are buying an article equal to that which is made at home. The "American Agriculturist," of November, quotes the price in New York at forty-five to fifty-five cents per bushel. A verbal account tells us it was sold in Baltimore at thirty-five.

The supply of matter in Richmond (and we presume such is the fact elsewhere in Virginia) is but limited so far. Bones are bought at the mill, whenever offered, at thirty-five cents per one hundred pounds. The refuse bones from the poor-house, &c. and also from some of the hotels and large establishments, are now beginning to be sent regularly, and what formerly was swept down the valleys, by every freshet, into James river—what before too often obstructed culverts and sewers in the city—now bids fair to become useful as a deodorous fertilizer upon our lands in the country. We were told that one of the most extensive butchers of the market, who had been in the habit of burning his refuse bones and using the ashes as manure, now sends all he has to mill.

We forbear to say anything in relation to the value of this manure, since the fact is so well established.

For the Southern Planter.

WATER-PROOF WAGON TENT.

To every gallon of spirits of turpentine put two and a half pounds of beeswax; generally speaking it will take two gallons to a wagon tent for a six-horse wagon. Boil well in the same pot; have a large iron pot close at hand with a little fire under it, to keep it warm; put the tent in, pour on the mixture with a tin cup; raise up the tent and turn it over frequently; punch and stir it about with a stick rounded at the end. When every part is saturated put it on a line or fence to dry, and you will have a tent that will be more than double as durable as any other, and will turn every drop of water—will keep your wagon dry, thereby save you, in a year or so, enough in doctor's bills to pay for fifty wagon tents of the kind. By using white beeswax, and lessening about half the quantity of wax, you may render leggings or wrappers, coarse over-coats, capes, umbrellas, &c perfectly water-proof, without injuring the material of which they are made, in the least.

I. I. Hite.

Buffalo Springs, Dec. 20, 1850.

BROOM-CORN.

Having heretofore called attention to the cultivation of this crop with the view to its manufacture at home, we follow up the subject, promising not to give our readers too many brushes upon it.

Inasmuch as it is cultivated for the sake of the *brush*, and not the grain, (as mostly with Indian corn,) a thicker planting should be practised. The profit will be in the weight of the long seed, stems, or panicles, which grow at the end of the stalk proper. These are always sold by weight. The latest quotation

in the New York market which we have seen is eight cents per pound. The price is sometimes as high as fifteen. Think of that, gentlemen, you who are glad to get seven-eighths of a cent per pound for the best herdsgrass, timothy and clover hay!

But whilst thicker planting than that of Indian corn is most to be recommended, the land should be also stronger. It is evident that a crop planted more in manner resembling the drilled ruta baga turnip, where only space enough between the rows for a horse and plough to pass is allowed, should have a better soil than a crop planted five or five and a half by two or two and a half feet. If the land be intended for a crop of wheat after the corn is taken off, a heavy dressing of manure given to the broom-corn will be felt by the wheat. Say, for example, your field for corn (Indian) is seventy-five acres, and you determine to dock five acres for broom-corn and manure it highly. These five acres need not be in a body but might be in different parts of the field where manure was most wanting. Do you not gain more by manuring five acres for broom-corn than spreading the heap over the entire field? Twelve hundred pounds have been frequently made to the acre. Reduce the amount one half, and at eight cents per pound that acre will have produced forty-eight dollars. The stalk and fodder are of little value, as provender—but good for manure. The grain (except when it is wanted for seed) has not been much used amongst us. Some years since, Mr. William Brown, of the Fredericksburg Agricultural Society, published his experience* which was in favor of its value as food, particularly for mules and cows. The late Henry Colman, well known as the Massachusetts State Agricultural Agent, considered it, after trial, as worth two-thirds as much as clean oats. But whether the grain be valuable or not, the brush is to be regarded as the paying part of the crop.

The tillage is similar to that of Indian corn, and he who can make one can make the other. The crop coming to maturity at a busy season, the heads of the stalks are usually bent downward and allowed to remain until opportunity can be had for cutting and housing. A belief prevails among many that this bending down the head and allowing it to remain in the field on the stalk is necessary to form the material of a good broom. We, however, are not aware of any advantage to be derived in that respect. By being left in the field so bent down, a straighter straw may be secured. But to those who do not desire to preserve the grain we can perceive little advantage except the labor saved in scraping off the grain, or seed, which thus fall to the ground of their own accord. We have been told of instances where broom-corn has grown spontaneously from seed thus dropped.

Without saying more, at this time, we will give the following from a Rhode Island paper to show what the people of that part of the Union think of our capacity to produce the article:

"Southern broom corn is very superior to the Northern article, being finer and more abundant; as it is free from seeds it offers no attractions to the rats which often make sad havoc with the Northern article."

* Farmer's Register, Vol. VII. page 3.

For the Southern Planter.

INFORMATION WANTED.

Mr. Editor,—As the pages of your journal are devoted entirely to the interest and advancement of agriculture, permit me to address a few inquiries to my brethren of the plough. Having lately purchased a small farm, which, however, unfortunately numbers a majority of poor acres, but which, with the blessing of "The Great I Am," I purpose to improve and desire to accomplish it in the second rotation of crops, yet the task is difficult, and one from which a less energetic mind than I happily possess would shrink, yea, yield the point. My first object will be to lay off the farm in three shifts of forty acres each, and as I do not intend grazing shall have no dividing fence; turn-rows alone will designate the line of shifts. These also will be cultivated occasionally, to prevent their getting foul.—After laying off the shifts as above, I shall commence in February to fallow No. 1, on which I shall use the subsoil plough in every other furrow of the turn-plough. In March I shall apply lime (as far as my pocket will justify), twenty bushels to the acre, and harrow it in. In April I shall plant in corn, and seed one bushel of peas to the acre at the laying-by of the corn. In October I propose to seed in wheat all the limed land, if the pea-fallow will justify it. At the same time I shall sow one gallon of cloverseed on every acre seeded in wheat. No. 2 I purpose planting in peas

one-half, the other half to be seeded in the Chickasaw pea; all of which will be allowed to ripen their seed; but the vine will be permitted to lie on the land for the next corn crop. No. 3 will lie at rest. The system will be this:

1851. No. 1, in corn and peas—peas fallowed in for wheat in October.
No. 2, in peas—permitted to ripen—vine left on the land.
No. 3, at rest—not grazed.
1852. No. 1, in wheat and clover.
No. 2, in corn and peas—peas turned in for wheat in October.
No. 3, in peas—permitted to ripen—vine left on the land.
1853. No. 1, in clover—not grazed.
No. 2, in wheat and clover.
No. 3, in corn and peas—peas turned in for wheat in October.

Each shift will receive a dressing of twenty bushels of lime per acre for the corn crop, and as much manure broadcasted as can be collected. I desire to know, if the above can be considered an improving system, will the land double its yield the second over the first corn crop? After the land gets well set in clover I shall abandon the seeding of peas, except at the laying-by of the corn, and permit the clover to take possession; it will then be corn, wheat and clover. I have another system in view, and it is this: lay off the farm in two shifts of fifty-five acres each (leaving ten acres for sweet potatoes and such like.)

Take No. 1 in February—fallow for corn—run the subsoil plough in every other furrow—apply twenty bushels of lime per acre in March, and harrow in—seed in peas in July, and seed in wheat in October. No. 2 seed in peas in July, to be turned under in October for the next corn crop. Apply twenty bushels of lime in the spring, and harrow in or re-plough the land, and then harrow in the lime. The system will be this:

1851. No 1, in corn and peas—ploughed in for wheat in October.
No. 2, in peas—permitted to ripen—and ploughed in for corn in October.

By adopting this system the entire farm would yield annually a crop; but I have my doubts in regard to its being an improving system. The question lies here. Will the pea fallow for wheat return more to the soil than the corn crop has taken from it? and will the pea fallow which is to follow the wheat crop, seeded on the stubble, for the benefit of the coming crop of corn, return more to the land than the wheat crop has taken therefrom? In either system twenty bushels of lime would be applied per acre to every corn crop, until each shift had received one hundred bushels per acre. All the manure that could be made on the farm would be broadcasted for the corn crop. In the latter system no grass could be raised, unless the ten acres should be divided so as to have annually two small clover lots and a potato patch.

I trust, Mr. Editor, that I shall receive the information desired from you or some of your subscribers. The most of the farm is well adapted to the growth of wheat, corn and clover, there being a fine intermixture of clay in the subsoil.

Truly, yours, N. T. E.

December 7, 1850.

RAILROADS.

The first train of cars passed over the Eastern extension of the Virginia Central Railroad on the 20th of December. This extension embraces a line of about twenty-seven miles from the "Junction," in Hanover, to a point in Richmond near the Old Market house. Some description of the country along the line; its agricultural capacity and the system of cultivation pursued on several of the farms, will be given in a future number.

As interesting to our readers, we annex the charges for transporting the leading articles of farm produce and consumption:

CHARGE FOR FREIGHT

Between Rich'd & C. House.	*Louisa*	*Gordonsville.*	*Charlottesville.*
Plaster, guano and other manures, per ton of 2000 lbs.	$1 65	$1 75	$2 00
Wheat, per bushel of 60 lbs. in owner's bags,	8½	11	13
Corn, per bushel of 56 lbs. in owner's bags,	7½	10	11
Flour, per barrel,	30	30	35
Tobacco, per 100 lbs.	27	30	33
Hogs & sheep, each,	35	35	40
Bacon, butter & lard, when carried down, per 100 lbs.	20	22	25
Fish, per barrel, and salt, per sack,	30	30	38
Dry goods,	33	34	35
Groceries, &c.	25	28	30

The Richmond and Danville Railroad was, on new-year's day, opened for the transportation of passengers and freight on the first section, of thirteen miles, extending hence to the Falling Creek Coal Pits. We hear that one hundred thousand tons of coal are raised and ready for transportation to tidewater. The rail on this part of the road is represented as inferior to none in the country. As the road is extended through the rich farming and planting districts of the "Southside," we promise

ourselves the pleasure of personally seeing many of our patrons on their own soil.

An article on the Virginia and Tennessee Railroad is unavoidably deferred.

For the Southern Planter.

Variety Shades, Buckingham, Jan. 1, 1851.

Hon. Thomas Eubank, *Commissioner:*

Dear Sir,—I have been so much pressed with business engagements that I have not had a leisure moment before this to reply to the circular from the Patent Office of August 16th, 1850.

Before I proceed to answer such queries in the circular referred to, as I am conversant with, permit me to remark that, whilst I am extensively engaged in agriculture, perhaps, to as great an extent as any one in the county, and giving as much, if not more, personal attention to the subject, it has been my misfortune, from some cause or other, to have received but a single copy (that of 1848) of that valuable document, the "Patent Office Report." This invaluable document should, in my opinion, be printed and sent, without stint, throughout the broad extent of the Union, and thus become a medium of interchange of opinions among the agriculturists of the country.

Wheat.—I have been engaged in farming since the year 1824. I have cultivated almost every variety known or used in the country. The varieties in circulation in this section are numerous. The most esteemed, and those to which I give preference, are the Early Red Purple Straw, the White Purple Straw, called by some the "Woodfin,"* by others the Blue Stem, and the Lolla, a beautiful white and very safe wheat, if sowed early on high, dry land, but in no wise safe if sown on flat land. The average product is about ten bushels per acre. Time of seeding from 20th September to 1st November. If practicable I would prefer seeding the entire crop from the 5th to the 15th of October. Harvested from the 15th of June to 4th July—varying as to seasons. The only preparation in use among us is to soak the seed in strong brine; seed from one to two bushels per acre, according to the strength of the land, broadcast—the drill not being used. One bushel is considered enough for thin land and two for rich fallowed land and tobacco lots. The plan most approved in this section is to fallow clover land in the summer, in the months of July and August three-horse plough being used; re-fallow with two-horse ploughs at the time of seeding; sow and then harrow. This plan I pursue, and regard it as the best, having experimented with all the different modes of getting in, from the naked coulter to the cultivator, harrow, &c. Though in this view I find I come in collision with my friend, Mr. William Gilmer, of Albemarle. He, in very strong terms, condemns the re-fallowing system. No universal system can be adopted; soils varying almost as much as the faces of men, what would be a *good* plan of cultivation in one kind of soil might be *decidedly bad* in another. Thus I account for the difference of opinion between Mr. Gilmer and myself. In Albemarle they have a red, light soil with a strong, rich clay foundation, which, when well fallowed, does not become hard before seeding. Here we have a gray or black soil with hornblend rock interspersed, resting upon a good clay foundation, universally regarded as fine wheat land, and the re-fallowing is the favorite and most successful system. The average yield is, I think, upon the increase, but the crop is certainly more liable to disaster now than in former years. When I speak of the average yield being more than in former years, I mean to except that period when but little wheat was made, and that seeded on rich fresh land. Lime has not been used, except in a very partial manner. I feel satisfied that our lands are peculiarly adapted to its use, and that the quantity of wheat would be greatly increased thereby. Thus far we have been prevented by the expense. Many of us are looking forward to a period, not remote, when we hope the cost will be reduced so as to allow its liberal use for agricultural purposes. The James River and Kanawha Canal, shortly to be opened to Buchanan, in the *lime region*, we trust, will have this effect.

I practise the five-field system, having every year two fields (two-fifths) in wheat, one field (one-fifth) in corn, two fields (two-fifths) in clover. I have the same number of tobacco lots, and cultivate in the same manner—one-fifth in tobacco, two-fifths in wheat, and two-fifths in clover. Thus it will be seen that I fallow one clover field and one clover and tobacco lot each year, and sow in wheat along with the corn and tobacco land.

I know of no remedy for the Hessian fly. I am of the opinion that this insect, so injurious to the wheat crop, is with us annually, and that the evils resulting from its attack can only be overcome by favorable seasons. If the months of October and April are favorable and growing months, the time at which the injury is inflicted by the insect, the wheat branches and outgrows the injury; on the contrary, when these months are dry and harsh, the injury is inflicted when there is not sufficient warmth and moisture in the land to nourish the plant.

A certain preventive of the white weevil is to have your wheat well cured before it is shocked in the field, and thresh out early in good, dry order, and, my word for it, you will never see in your barns black weevil.

The crop of the present year was very much injured by the rust, consequently the price varies, according to quality, from sixty to ninety-five cents, at our nearest market.

* A name merely local.

Corn.—The most esteemed varieties are the Gourdseed, Large White, and Large Yellow, or Nansemond, of which the latter, for stock, is decidedly preferable. I do not think much importance ought to be attached to the variety, as any kind may be so improved as to increase both quantity and quality by selecting the best ears from the most prolific stalks. My practice for years past has been to select my seed in the field by taking the best ear from the stalk having the greatest number.

Owing to the great diversity of soil the average product varies very much. On James river bottom from forty to fifty bushels, best high lands thirty bushels, and five bushels on the ridges, reducing the average to something like fifteen or twenty bushels. Cost of production about thirty cents per acre.

The common method of cultivation is to plough deep in the fall and early part of winter. In the spring, before planting let the land be well pulverized by harrowing—lay off and plant in drills four to five feet apart—stalks from eight inches to two feet in the row, according to the quality of the land. When the corn is up about six inches use the plough or cultivator, according to the condition of the land, thinning at the same time and brushing with the hoes; afterwards use nothing but the cultivators, and small quantity of earth put to the corn with the hilling hoes. By this plan you keep your land level, which I regard the best system of corn culture.

The best method of feeding is to grind and mix with cut rough food for horses. Nothing of the fodder kind should be fed in the rack. For swine and horned cattle I would recommend both grinding and cooking.

Oats.—Average product of this grain fifteen bushels per acre from one to two bushels seed. This crop is a great exhauster; so much so that I doubt the propriety of raising them to any extent.

Peas are not cultivated as a renovator. I have made some use of them this year for this purpose, but as yet am not entirely satisfied that I can do so profitably. I purpose making further experiments, this last having been made in an unfavorable season.

Clover is extensively used for hay grazing, and as a renovator it yields from one and a half to two tons of hay per acre, requiring one gallon of seed.

Neat Cattle, Sheep and Wool, except to a limited extent, are only raised for home consumption and use.

Hogs.—I have tried the Nobone, Bedford, Surry, China, Berkshire and Irish Grazier, and find that any one, without *frequent crossing*, will rapidly depreciate. One hundred pounds of corn will produce forty pounds pork. The plans of curing are very numerous, each having their advocates; but the plan I suggest is one that I have practised for many years, and have never failed in having *good sweet, bacon.* After killing, allow the *animal heat to escape*—cut out, and when perfectly cool, to each ham and shoulder put a half tea-spoonful of saltpetre and sufficient salt, well rubbed in, pack down; after remaining (jowles and sides) three to four weeks, hams and shoulders four to five weeks, take out and rub with dry hickory or oak ashes; then hang, and smoke gently with hickory or oak chips, in dry weather only.—About the 1st of June take down and pack away in dry ashes or pulverized charcoal.

Tobacco.—Average yield per acre about eight hundred pounds. Cost of production about four dollars per hundred, or sixty dollars per hogshead. *Mode of cultivation and curing* I would state as follows: Permit your tobacco to get thoroughly ripe before it is cut; scaffold it in the field until it yellows or spots freely; then house, and with gentle fires under it until it yellows throughout, then gradually increase the fires, drying the leaf slowly about half way. This will take some three or four days; sometimes longer, if the weather is cool. The heat that I prefer for the first three days should be about equal to a hot day in August in the sun; the fourth day about one hundred and ten degrees. After this, when it comes in what would be termed soft order, fire again, so as to dry the entire stem, and no fire is necessary afterwards unless in very damp weather. In December take down in soft stripping order, passing it through about three hands, each of whom should whip it against their thighs to get off the dirt and dust before reaching the bulker. Your tobacco is now ready for stripping. When you commence each day's stripping, being first carefully assorted and sized, should be passed two bundles at a time through several hands, straightening it passing to the bulker, who lays it straight in bulk, upon which a good portion of weight should be placed. Afterward, in *soft days*, pass it again through as many hands, one bundle at a time, each one straightening as before, and re-bulk, weighting very heavy (with rock.) Let it remain in this situation until the last of March. Then rehang without opening the bundle, except just below the tie, having your sticks for this purpose small, and made smooth with a drawing-knife. The stripped tobacco being now hung up to dry out, should be closely watched; if the weather is moist take down on the sticks; for if permitted to remain and get in *high order* all your labor in straightening is lost. The first warm season after it is dried out take it down when the leaf is in pliant order, and the stem by pressing breaks freely; passing again through several hands, re-bulk and weight heavily. In a short time prize, laying it straight in the hogshead.

Manures.—I do not know that I can give the *best system* for making manures. My plan is to feed cornstalks, scatter leaves and other vegetable matter in the farm-pen, so as to increase the bulk to as great an extent as possible. In the spring haul out upon tobacco land and top-dress young clover. I feel confident there is great deficiency in management in this particular. The *exposure* of manures is cer-

tainly very injurious; they should, if possible, be kept under cover until ready for use.

I have made some experiments with guano. In November, 1849, I used one ton on wheat on thin land. Last summer the same quantity on oats, corn and tobacco. That on wheat increased the produce from six to twelve bushels per acre, and fully repaid the outlay. Not so with that on oats, corn and tobacco—the benefit being very slight. I have made a further experiment this fall, using two tons to twenty acres (two hundred pounds to the acre.) My experiments have satisfied me that it may be used profitably on wheat upon thin land if the price could be reduced to about forty dollars per ton; but I regard it as unsafe for a summer crop. It is in dry weather decidedly injurious. Should the summer be moist I have no doubt it would be beneficial, but our summers being frequently quite dry I regard it as too hazardous. My mode of using it is to sow it down and turn it under with a three-horse plough.

Very respectfully,

THOMAS M. BONDURANT.

The foregoing communication is the result of another dip into the portfolio of the Patent Office Report, which will soon appear. It has been furnished us in advance of its publication in that document at our request, and will be read with interest, as well from the subject matter as from the long experience in agricultural operations of its author.

For the Southern Planter.

HORTICULTURAL REMARKS FOR JANUARY, 1851.

PREPARED BY A. D. ABERNETHY, FLORIST, GRACE STREET, RICHMOND, VIRGINIA.

Air greenhouses, &c. freely during mild weather, and look over the plants occasionally, to pick off decayed leaves; give plenty water to camellias, which will now be blooming, and let them have a conspicuous situation, as they are the chief ornament of the greenhouse at this season. Examine dahlia roots and pick out the decayed ones. Vacant ground, as well as all beds and borders in the flower garden, if not previously done, ought now to be well manured and spaded. Roll gravel walks occasionally. All ground operations, such as laying down turf for lawns or verges, forming new flower gardens, &c. should, if convenient, be done at this season, when there is less routine work to be done than at any other time, and also that the ground may be in readiness to receive the plants in proper season. Slight hotbeds should now be put up for sowing early cabbage and lettuce. Still continue to plant out fruit trees, grape vines and other hardy trees and shrubs.

EXTRACT FROM EDITOR'S CORRESPONDENCE.

"*Fairfax, Nov.* 29, 1850.

"I have been a subscriber to the Southern Planter for six years and have enjoyed the perusal of its pages with a high degree of satisfaction. I have endeavored to extend its circulation and shall still continue, in my humble way, to recommend it as a valuable paper, and well worthy the attention of the agricultural portion of the community, or indeed any other portion."

THE OSAGE ORANGE.

This plant, taking its name from the Osage tribe of Indians, and growing wild in the Southern portion of our confederacy, is now nursed in most Northern latitudes for the purposes of fencing. An opinion has long prevailed and still obtains with many who are inclined to try it, that a mild climate and a short winter are necessary to its successful propagation. It has been spoken of as a plant suited to the conservatory, requiring glass to protect it from the cold of a severe winter. In our issue of last June (Vol. X. page 166) we published a communication giving a very favorable occaunt of the writer's experience in its propagation from the seed *and from cuttings.* We know his residence not to be in a very warm situation. Since then, having seen more of the plant, we are strengthened in the belief that it is adapted to the climate of Eastern Virginia, and we venture to mention the beautiful specimens of differeut roses at the residence of Francis Nelson, Esq. situate at the base of the Southwest mountains, in Albemarle. Near this city Gen. William H. Richardson has a large nursery, where the plants have grown off both rapidly and vigorously. His nursery will supply a desideratum long felt.

The fence laws of Virginia have so long operated as a grievous tax upon the agricultural producer, and the hope of modifying them appears so distant, that almost any substitute for the "still beginning, never ending" labor of fencing and repairing and jarring, is worthy of consideration. Our best timber is disappearing from our native forests, estates are being divided, railroads progressing in every direction, splitting fields and sometimes

even cutting the curtilage in twain—all these things are increasing upon us, and we should search for a remedy. We cannot make walls of stone: all have not the material. If we plant the cedar another generation may come before it prove of any service. And as for *wire*, we should be content to surrender that to the magnetic telegraph. Wire fences will continue to be made on a few farms, but will never become general. What course shall we pursue in order to have a fence which will answer our purposes—present and future—should the law be not changed.

If it can be shown that the Osage orange will thrive here—will be effective—will be permanent, deriving its repairs from the soil and the atmosphere, and not from "winter's mauling and summer's hauling," then it should be tried fully and fairly.

We give a few lines from a work of Mr. A. J. Downing—the Horticulturist:

"The Osage orange, when treated as a hedge plant, has many excellent characteristics. It is robust, vigorous and long-lived. It sends out a great abundance of branches, bears trimming perfectly well, is most amply provided at all times with stout thorns, and its bright and glossy foliage gives it a very rich and beautiful appearance. It grows well on almost any soil, and makes a powerful and impenetrable fence in a very short time. Though it will bear rough and severe pruning, and is, therefore, well adapted for farm fences, yet it must be regularly trimmed twice every year, and requires it even more imperatively than other hedge plant, to prevent its sending out strong shoots to disfigure the symmetry of the hedge."

In the foregoing it will be observed that Mr. D. paints both sides of the picture. He says nothing to allure, but states what labor has to be undergone. In another part of his work he gives his opinion as to the best season for planting—the spring in northern latitudes and the autumn in southern. This opinion is entitled to respect; but we have seen as flourishing hedges and orchards from spring plantings, here in the South, as from those of autumn.

After giving his mode of pulverizing and preparing the soil, he goes on to state how he does the planting:

"The plants are now to be made ready. This is done, in the first place, by assorting them into two parcels—those of *large* and those of *small size*. Lay aside the smaller ones for the richest part of your ground and plant the larger ones on the poorest of the soil. This will prevent that inequality which there would be in the hedge if strong and weak plants were mixed together, and it will equalize the growth of the whole plantation by dividing the advantages.

"The plants should then be trimmed. This is speedily done by cutting down the top, or stem, to within about an inch of what was the ground line, (so that it will, when planted again, have but an inch of stem above the soil,) and by correspondingly shortening all the larger roots about one-third.

"If you have a good deal of planting to do it is better to bury the plants in a trench close at hand, or *lay-them-in-by-the-heels*, as it is technically called, to keep them in good order till the moment they are wanted.

"The hedge should be planted in a double row, with the plants placed, not opposite to each other, but alternate—thus:

* * * * * * * *
* * * * * * *

"The rows should be six inches apart, and the plants one foot apart in the rows. This will require about thirty-two plants to a rod, or two thousand plants to one thousand feet.

"Having well pulverized the soil, set down the line firmly for the first row, and with a spade throw out a trench about eight or ten inches deep, keeping its upright, or firm bank, next to the line. Drop the plants along the line at about the distance they will be needed, and then plant them twelve inches apart, keeping them as nearly as possible in a perfectly straight line; for it is worth bearing in mind, that you are performing an act, the unimpeachable *straight-forwardness* of which will undoubtedly be criticised for many years afterwards. Press the earth moderately round the stem of the plant with the foot, when the filling-in of the pulverized soil is nearly completed. And, finally, level the whole nicely with the hoe.

"Having finished this row, take up the line and fit it again, six inches distant; open the trench in the opposite direction, and set the plants in the same manner. This completes the planting."

The seed of the Osage orange are very minute and of a hard, flinty nature. Like all similar seeds, it germinates sooner and with more certainty by being first scalded in warm water.

Could this plant be established as a hedge, as we are induced to believe it can be, there are many situations where it would be most useful. There is the line of the James river canal, passing through one estate after another, the property, the growing crops, the fruit, and whatever else may tempt the dishonest boatman to plunder, all exposed to his mercy. In most places there is no fence on

either side. A thorn hedge would be a fence which few would venture to penetrate, and none to scale. If it were penetrated, itself would tell that a plunderer had been through—some one who dared not enter at the bridges. And, if planted alongside the tracks of railroads besides being a graceful ornament, in itself, and a set-off against some of the dull scenery which passengers are compelled to behold, it would be a protection to the companies against obstructions by cattle and ill-feeling, often entertained, by landholders.

If any of our readers can give us any account of experiments with cuttings from the *Cherokee rose* we should be glad to hear from them.

CONTENTS OF NUMBER I.

COMMERCIAL RECORD.

WHOLESALE PRICES CURRENT,

Reported for the Southern Planter by

NANCE & GOOCH, COMMISSION MERCHANTS.

TOBACCO.—Our markets opened since the holidays with some animation—prices ranging from $3 30 to $14 25. New Lugs $3 30 to $6. Old $5 to $8. Leaf $9 to $14 25. We do not consider it necessary to make a more detailed report, as the market has not fully opened. The tendency is upwards.

FLOUR.—Nothing doing. Holders asking $4 87 a $5 for Richmond. Scottsville $5 a $5 12½. Only a few small operations at these rates.

CORN.—60 cents, with ready sales.

CORN MEAL—70 cents per bushel.

WHEAT.—Slight decline. Deliveries of very inferior quality. Red $1 to $1 05. White $1 05 to $1 10.

OATS.—None in market. Last sales 45 cts.

RYE.—75 cents. Demand good.

GUANO.—Peruvian $55. Patagonian $40.

CLOVERSEED.—$5 a $5 25.

PLASTER.—$3 37½ on the wharf. Basin $4 for lump. Ground, 500 tierces, $1 45.

SALT.—Scarce. $1 60 from wharf. In store $1 65 a $1 70.

Richmond, Jan. 10, 1851.